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Priority date is June 16, 1999


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FILE COVERS 1907 - 23 Feb 2004  VOL 140 ISS 9
FILE LAST UPDATED: 22 Feb 2004  (20040222/ED)

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.


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L16              STR

N   C   C   C   N-  C-  C-  C-  C-  N-  C-  C-  C-  N
1   2   3   4   5   6   7   8   20  9   10  11  12  13


NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  14

STEREO ATTRIBUTES: NONE
L18         3834 SEA FILE=REGISTRY SSS FUL L16
L19           18 SEA FILE=REGISTRY ABB=ON  PLU=ON  L18 AND (LYSINE? OR ORNITHINE
                 ? OR HISTIDINE?)
L24           19 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L19


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L24  ANSWER 1 OF 19  HCAPLUS  COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER:         2003:551337  HCAPLUS
DOCUMENT NUMBER:          139:122734
TITLE:                    Lipids for delivering substances into cells
INVENTOR(S):              Chu, Yong Liang; Li, Franck Q.; Qiu, Jian-tai; Lin,
                          Jerry
PATENT ASSIGNEE(S):       Vaxim, Inc., USA
SOURCE:                   PCT Int. Appl., 59 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
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LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003057164	A2	20030717	WO 2003-US211	20030106
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2003134423	A1	20030717	US 2002-35223	20020104

PRIORITY APPLN. INFO.: US 2002-35223 A 20020104
OTHER SOURCE(S): MARPAT 139:122734

AB Lipids and compns. of lipids that can be used as lipid aggregates (i.e., liposomes) for the delivery of macromols. and other compds. into cells are provided. The lipids can be used to form lipid aggregates (i.e., liposomes). These lipid aggregates can serve as transfection reagents for the delivery of various compds. into cells. Suitable compds. that can be delivered into cells include nucleic acids (e.g. DNA, RNA), oligonucleotides, proteins, peptides, and small mol. drugs. One example compd. prepd. was ditetradecyl(2-hydroxy-3-propylamino)aminopolylysine and this compd. and a similar compd. were formulated in lipid compns. as transfection reagents for DNA delivery.

IT **561297-40-3**
RL: RCT (Reactant); RACT (Reactant or reagent)
(lipids for delivering substances into cells)

L24 ANSWER 2 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:789682 HCAPLUS
DOCUMENT NUMBER: 137:273730
TITLE: Efficient synthesis and cell-transfection properties of a new multivalent cationic lipid for nonviral gene delivery
AUTHOR(S): Ewert, Kai; Ahmad, Ayesha; Evans, Heather M.; Schmidt, Hans-Werner; Safinya, Cyrus R.
CORPORATE SOURCE: Department of Materials, University of California, Santa Barbara, CA, 93106, USA
SOURCE: Journal of Medicinal Chemistry (2002), 45(23), 5023-5029
CODEN: JMCMAR; ISSN: 0022-2623
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Lipid-mediated delivery of DNA into cells holds great promise both for gene therapy and basic research applications. This paper describes the efficient and facile synthesis and the characterization of a new multivalent cationic lipid with a double-branched headgroup structure for gene delivery applications. The synthetic scheme can be extended to give cationic lipids of different charge, spacer, or lipid chain length. The chem. and phys. properties of self-assembled complexes of the cationic liposomes (CLs) with DNA give indications of why multivalent cationic lipids possess superior transfection properties. The lipid bears a headgroup with five charges in the fully protonated state, which is attached to an unsatd. double-chain hydrophobic moiety based on 3,4-dihydroxybenzoic acid. Liposomes consisting of the new multivalent

lipid and the neutral lipid 1,2-dioleoyl-sn-glycerophosphatidylcholine (DOPC) were used to prep. complexes with DNA. Investigations of the structures of these complexes by optical microscopy and small-angle X-ray scattering reveal a lamellar L.alpha.C phase of CL-DNA complexes with the DNA mols. sandwiched between bilayers of the lipids. Expts. using plasmid DNA contg. the firefly luciferase reporter gene show that these complexes efficiently transfect mammalian cells. When compared to the monovalent cationic lipid 2,3-dioleyloxypropyltrimethylammonium chloride (DOTAP), the higher charge d. of the membranes of CL-DNA complexes achievable with the new multivalent lipid greatly increases transfection efficiency in the regime of small molar ratios of cationic to neutral lipid. This is desired to minimize the known toxicity effects of cationic lipids.

IT **220170-83-2P 464925-99-3P**
RL: BUU (Biological use, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)
(efficient synthesis and cell-transfection properties of a new multivalent cationic lipid for nonviral gene delivery)

REFERENCE COUNT: 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 3 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:309818 HCAPLUS
DOCUMENT NUMBER: 136:336176
TITLE: Compositions containing DNA, Tat peptide-nucleic acid binder conjugates, and cationic lipids for cell transfections
INVENTOR(S): Hawley-Nelson, Pamela; Lan, Jianqing; Shih, Pojen; Jessee, Joel A.; Schifferli, Kevin P.; Gebeyehu, Gulilat; Ciccarone, Valentina C.; Evans, Krista L.
PATENT ASSIGNEE(S): Life Technologies, Inc., USA
SOURCE: U.S., 108 pp., Cont.-in-part of U.S. 6,051,429.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 5
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6376248	B1	20020423	US 1998-39780	19980316
US 6051429	A	20000418	US 1997-818200	19970314
US 2003069173	A1	20030410	US 2001-911569	20010723
US 2003144230	A1	20030731	US 2002-200879	20020723

PRIORITY APPLN. INFO.:
US 1997-818200 A2 19970314
US 1995-477354 B2 19950607
US 1996-658130 A2 19960604
US 1998-39780 A1 19980316
US 2001-911569 A1 20010723

AB The present invention provides compns. useful for transfecting cells comprising nucleic acid complexes with Tat peptide, wherein the peptide is covalently coupled to a nucleic acid-binding group, and cationic lipids as transfection agents. Inclusion of peptides in transfection compns. or covalent attachment of peptides to transfection agents results in enhanced transfection efficiency. Methods for the prepn. of transfection compns. and methods of using these transfection compns. as intracellular delivery agents are also disclosed.

IT **213131-55-6**
RL: RCT (Reactant); RACT (Reactant or reagent)
(compns. contg. DNA, Tat peptide-nucleic acid binder conjugates, and cationic lipids for cell transfections)

REFERENCE COUNT: 157 THERE ARE 157 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 4 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2000:401776 HCAPLUS
DOCUMENT NUMBER: 133:38223
TITLE: Polyamine amide derivative transport inhibitors, their preparation, and their therapeutic and diagnostic use
INVENTOR(S): Poulin, Richard; Audette, Marie; Charest-Gaudrealt, Rene
PATENT ASSIGNEE(S): Universite Laval, Can.; Ilex Oncology, Inc.
SOURCE: PCT Int. Appl., 111 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000034226	A1	20000615	WO 1998-US26493	19981210
W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 9919988	A1	20000626	AU 1999-19988	19981210

PRIORITY APPLN. INFO.: WO 1998-US26493 A 19981210
OTHER SOURCE(S): MARPAT 133:38223
AB The application discloses synthetic derivs. of original polyamines in which a carbon atom to the original polyamine comprises an amide group inhibits the cellular uptake of a natural polyamine by specifically binding a cellular transporter for a natural polyamine. The synthetic derivs. are used to inhibit the activity of a natural polyamine transporter in the treatment of disorders involving unrestrained cell proliferation and/or differentiation where control of polyamine transport is required When used in combination with an inhibitor of polyamine synthesis.
IT **119798-07-1P 213131-55-6P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction; polyamine amide deriv. transport inhibitor prepn. and diagnostic and therapeutic use)
REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 5 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2000:388556 HCAPLUS
DOCUMENT NUMBER: 133:34433
TITLE: Reagents for intracellular delivery of macromolecules
INVENTOR(S): Gebeyehu, Gulilat; Jessee, Joel A.
PATENT ASSIGNEE(S): Life Technologies, Inc., USA
SOURCE: U.S., 21 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

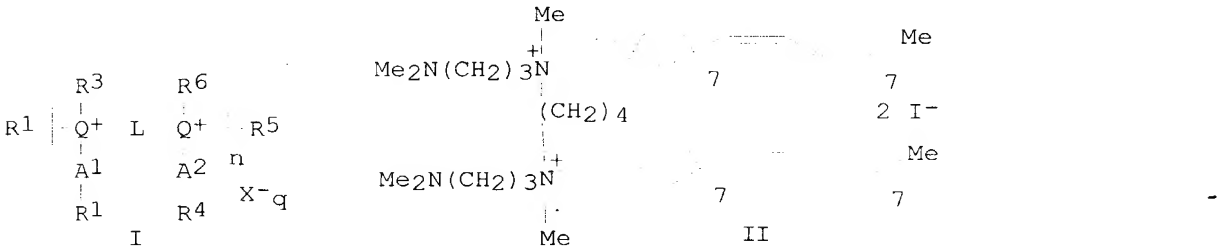
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6075012	A	20000613	US 1994-195866	19940211

PRIORITY APPLN. INFO.: US 1994-195866 19940211
OTHER SOURCE(S): MARPAT 133:34433
AB The present invention discloses cationic lipids and lipophilic compds. useful for making lipid aggregates for delivery of macromols. and other compds. into cells. They are esp. useful for the DNA-dependent transformation of cells. Compns. of cationic lipids and viral components or non-viral fusagenic compds. useful for enhancing transfection are also described.
IT **124076-28-4**
RL: RCT (Reactant); RACT (Reactant or reagent)
(reagents for intracellular delivery of macromols.)
REFERENCE COUNT: 47 THERE ARE 47 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 6 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2000:335366 HCAPLUS
DOCUMENT NUMBER: 132:334312
TITLE: synthesis and activity of transfection reagents for transport of biol. active agents or substances into cells
INVENTOR(S): Chu, Yongliang; Masoud, Malek; Gebeyehu, Gulilat
PATENT ASSIGNEE(S): Life Technologies, Inc., USA
SOURCE: PCT Int. Appl., 130 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000027795	A1	20000518	WO 1999-US26825	19991112
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1129064	A1	20010905	EP 1999-971794	19991112
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2002529439	T2	20020910	JP 2000-580975	19991112

PRIORITY APPLN. INFO.: US 1998-108117P P 19981112
WO 1999-US26825 W 19991112
OTHER SOURCE(S): MARPAT 132:334312
GI



AB Synthesis and activity of transfection reagents (I) [Q = N, O, S; L = (un)substituted alkyl, ether, polyether, amide, polyamide, ester, sulfide, urea, thiourea, guanidyl, carbamoyl, carbonate, phosphate, sulfate, sulfoxide, imine, carbonyl, secondary amine; R1-R6 independently = (un)substituted alkyl, alkenyl, aryl, ether; A1, A2 independently = CH2O, CH2S, CH2NH, CO, C=NH, CS, alkyl; X = physiol. acceptable anion; n = 1-1000; q = no. of pos. charge divided by valence of anion], cationic lipids capable of facilitating transport of biol. active agents or substances into cells, are disclosed. Thus, I [R1,R4 = oleyl; R2,R5 = Me2N(CH2)3; R3,R6 = Me; A1,A2 = CH2; L = (CH2)4; X = I] (II) is prepd. by reaction of bis-1,4-oleyl-1,4-butandiamine with acrylonitrile followed by redn. of nitrile to amine and quaternization of amine with Me iodide. II shows an activity of 37.8 ng/.beta.gal/cm2 in DNA delivery. Formulations contg. I are given.

IT **213131-55-6**
RL: RCT (Reactant); RACT (Reactant or reagent)
(synthesis and activity of transfection reagents for transport of biol. active agents or substances into cells)

REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 7 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2000:254039 HCAPLUS
DOCUMENT NUMBER: 132:289590
TITLE: Peptide-enhanced cationic lipid transfections
INVENTOR(S): Hawley-Nelson, Pamela; Lan, Jianqing; Shih, Pojen; Jessee, Joel A.; Schifferli, Kevin P.; Gebeyehu, Gulilat
PATENT ASSIGNEE(S): Life Technologies, Inc., USA
SOURCE: U.S., 103 pp., Cont.-in-part of U.S. 5,736,392.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 5
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6051429	A	20000418	US 1997-818200	19970314
US 5736392	A	19980407	US 1996-658130	19960604
WO 9840502	A1	19980917	WO 1998-US5232	19980316
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9865622	A1	19980929	AU 1998-65622	19980316
EP 1007699	A1	20000614	EP 1998-911737	19980316
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2001517939	T2	20011009	JP 1998-539899	19980316
US 6376248	B1	20020423	US 1998-39780	19980316
US 2003144230	A1	20030731	US 2002-200879	20020723

PRIORITY APPLN. INFO.:

US 1995-477354	B2	19950607
US 1996-658130	A2	19960604
US 1997-818200	A	19970314
US 1998-39780	A1	19980316
WO 1998-US5232	W	19980316
US 2001-911569	A1	20010723

AB The present invention provides compns. useful for transfecting eukaryotic cells comprising nucleic acid complexes with peptides, wherein the peptide is optionally covalently coupled to a nucleic acid-binding group, and cationic lipids or dendrimers as transfection agents. The invention also provides transfection compns. in which a peptide is covalently linked to the transfection agent (lipid, cationic lipid or dendrimer). Inclusion of peptides or modified-peptides in transfection compns. or covalent attachment of peptides to transfection agents results in enhanced transfection efficiency. Methods for the prepn. of transfection compns. and methods of using these transfection compns. as intracellular delivery agents and extracellular targeting agents are also disclosed.

IT **213131-55-6P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(in prepn. spermine-contg. peptides; increasing efficiency of uptake of transforming DNA complexes with polycations using peptides)

REFERENCE COUNT: 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 8 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1999:691066 HCAPLUS
DOCUMENT NUMBER: 131:307091
TITLE: Polyamine transport inhibitors, their preparation, and their therapeutic use
INVENTOR(S): Poulin, Richard; Audette, Marie; Charest-Gaudrealt, Rene
PATENT ASSIGNEE(S): Universite Laval, Can.; Ilex Oncology, Inc.
SOURCE: PCT Int. Appl., 115 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9954283	A1	19991028	WO 1998-US7806	19980421
W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
CA 2304557	AA	19991028	CA 1998-2304557	19980421
AU 9871316	A1	19991108	AU 1998-71316	19980421
EP 1003715	A1	20000531	EP 1998-918385	19980421
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				

PRIORITY APPLN. INFO.: WO 1998-US7806 A 19980421
OTHER SOURCE(S): MARPAT 131:307091

AB The invention describes the design, synthesis and therapeutic use of a variety of novel inhibitors of polyamine transport. The main feature of this class of transport inhibitors is to incorporate a linker or side chain that prevents the uptake of polyamines and helps to conjugate polyamine analogs to form dimers with high inhibitory potency against polyamine uptake. These new compds. incorporate features that are designed to maximize their chem. and metabolic stability and their ability to bind to the polyamine transporter, and to minimize their toxicity by preventing their absorption by the cells. The purpose of such inhibitors is to prevent the uptake or salvaging of circulating polyamines by rapidly proliferating cells such as tumor cells, in order to potentiate the effect

of therapeutic inhibitors of polyamine biosynthesis such as .alpha.-difluoromethylornithene.

IT **119798-07-1P 124076-28-4P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction; polyamine transport inhibitor prepn. and therapeutic use)

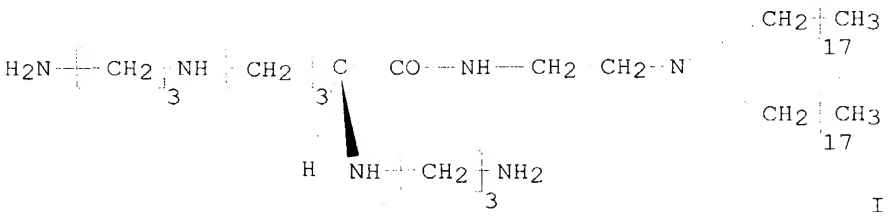
REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 9 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1999:136874 HCAPLUS
DOCUMENT NUMBER: 130:153974
TITLE: Preparation of novel lipopolyamines and their use in transport liposomes for carrying transfection agents
INVENTOR(S): Klosel, Roland; Konig, Stephan
PATENT ASSIGNEE(S): Biontex Laboratories G.m.b.H., Germany
SOURCE: PCT Int. Appl., 64 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9908997	A1	19990225	WO 1998-EP5156	19980813
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
DE 19834683	A1	19990401	DE 1998-19834683	19980731
AU 9893421	A1	19990308	AU 1998-93421	19980813
AU 745958	B2	20020411		
EP 1003711	A1	20000531	EP 1998-946333	19980813
EP 1003711	B1	20011107		
R: AT, BE, CH, DE, ES, FR, GB, IT, LI				
JP 2001515060	T2	20010918	JP 2000-509683	19980813
AT 208369	E	20011115	AT 1998-946333	19980813
ES 2167939	T3	20020516	ES 1998-946333	19980813
US 6281371	B1	20010828	US 2000-463172	20000329

PRIORITY APPLN. INFO.: DE 1997-19735125 A 19970813
DE 1998-19834683 A 19980731
WO 1998-EP5156 W 19980813

OTHER SOURCE(S): MARPAT 130:153974
GI



I

Not same structure
← spermine analog

AB The invention relates to novel lipopolyamines [H(NH(CH2)a)b]2-nN(H)n(CH2)cX(R)(CH2)dN(H)m[((CH2)eNH)fH]2-m, where R = (CH2)gN(R1)(R2); R1, R2 = independently (un)satd., (un)substituted alkyl; X = N, N(CH2)hC(O)NH, N(CH2)rC(O)O, N(CH2)kNHC(O), N(CH2)kOC(O), CHC(O)NH, CHC(O)O, CHC(O)NH(CH2)lNH, CHCH2NH; [see text for values and combinations of letter subscripts], (including their salts), characterized by a sym., highly flexible lipophilic component with a buffering capacity at physiol. pH, and to their use for funneling biol. active materials such as DNA, RNA, ribozymes, anti-sense DNA, peptides and proteins into eukaryotic cells in vivo or in vitro. Thus, N-BOC-N',N'-dioctadecylethylenediamine was prepd. from N-BOC-ethylenediamine and octadecyl bromide, and reacted with tetra-BOC-carboxyspermine, and the product N-deprotected to give I as its tetra-TFA salt. In in vitro transfection tests of pCVM<Sport>.beta.-Gal with CV-1, Hela S3, and NIH 3T3 cells, liposomes constructed from I and dioleoylphosphatidylethanoamine, dioleoylphosphatidylcholine, cholesterol, or cholesteryl-amine, in presence or absence of serum, showed relative transfection efficiencies of 66-100%.

IT **220170-83-2P 220170-84-3P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(reaction of in the prepn. of novel lipopolyamines for use in transport liposomes for carrying transfection agents)

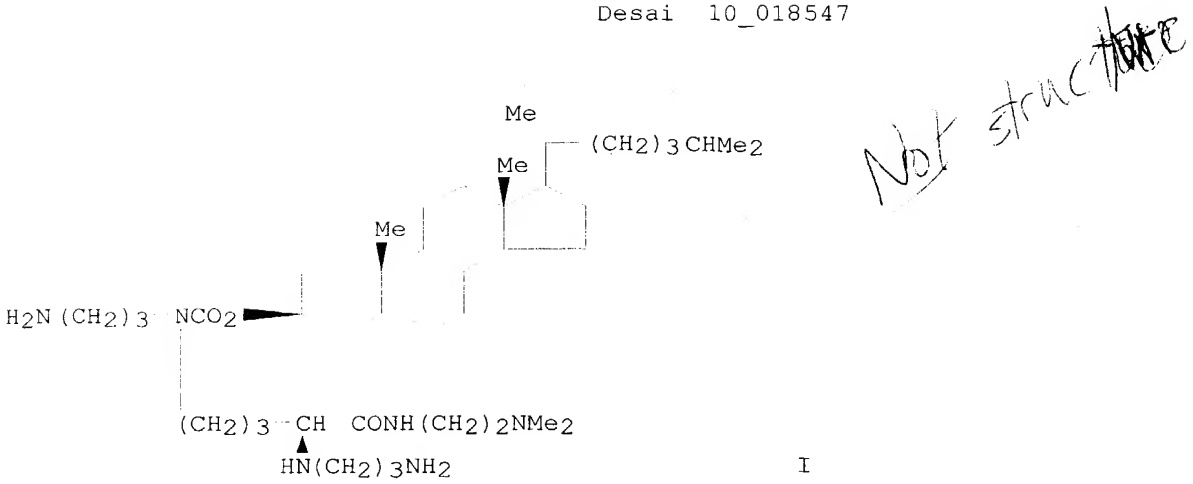
REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 10 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1998:684856 HCAPLUS
DOCUMENT NUMBER: 129:306524
TITLE: Cationic amphiphiles for intracellular delivery of therapeutic molecules
INVENTOR(S): Siegel, Craig S.; Lee, Edward R.; Harris, David J.
PATENT ASSIGNEE(S): Genzyme Corp., USA
SOURCE: PCT Int. Appl., 79 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9843994	A1	19981008	WO 1998-US6169	19980330
W: AU, CA, JP				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 5925628	A	19990720	US 1997-828234	19970331
AU 9867846	A1	19981022	AU 1998-67846	19980330

PRIORITY APPLN. INFO.: US 1997-828234 19970331
WO 1998-US6169 19980330

OTHER SOURCE(S): MARPAT 129:306524
GI



I

AB Novel cationic amphiphiles are provided that facilitate transport of biol. active (therapeutic) mols. into cells. There are provided also therapeutic compns. prepd. typically by contacting a dispersion of one or more cationic amphiphiles with the therapeutic mols. Therepeutic mols. that can be delivered into cells according to the practice of the invention include DNA, RNA, and polypeptides. Representative uses of the therapeutic compns. of the invention include providing gene therapy, and delivery of antisense polynucleotides or biol. active polypeptides to cells. With respect to therapeutic compns. for gene therapy, the DNA is provided typically in the form of a plasmid for complexing with the cationic amphiphile. An example amphiphile prepd. was I. Other examples given were cell transfection assay, CAT assay, construction of vectors, and correction of Cl- transport defect in airway epithelial cells of a cystic fibrosis patient by cationic amphiphile-mediated gene transfer.

IT **214398-85-3P 214398-86-4P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(cationic amphiphiles for intracellular delivery of therapeutic mols.)

IT **214398-52-4**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cationic amphiphiles for intracellular delivery of therapeutic mols.)

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 11 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1998:682412 HCAPLUS
DOCUMENT NUMBER: 129:311677
TITLE: Imidazole-containing cationic amphiphiles for intracellular delivery of therapeutic molecules using liposomes
INVENTOR(S): Siegel, Craig S.; Lee, Edward R.; Harris, David J.
PATENT ASSIGNEE(S): Genzyme Corporation, USA
SOURCE: PCT Int. Appl., 71 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9845317	A1	19981015	WO 1998-US6383	19980402

W: AU, CA, JP
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,

PT, SE

US 5912239	A	19990615	US 1997-833370	19970404
AU 9868749	A1	19981030	AU 1998-68749	19980402

PRIORITY APPLN. INFO.: US 1997-833370 19970404
WO 1998-US6383 19980402

OTHER SOURCE(S): MARPAT 129:311677

AB Novel cationic amphiphiles (Markush structure given) that can be used in liposomes to facilitate transport of biol. active and therapeutic mols. into cells are described. These mols. can be used in liposomes to deliver therapeutic mols. including DNA, RNA, and proteins. The hydrophilic moiety is a sterol and the hydrophobic moiety is polyamine, often including an imidazole group. Representative uses of the therapeutic compns. of the invention include providing gene therapy, and delivery of antisense polynucleotides or biol. active polypeptides to cells. With respect to therapeutic compns. for gene therapy, the DNA is provided typically in the form of a plasmid for complexing with the cationic amphiphile. Synthesis of.

IT **214398-85-3P 214398-86-4P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. and reactions of, in prepn. amphiphilic compds.; imidazole-contg. cationic amphiphiles for intracellular delivery of therapeutic mols. using liposomes)

REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 12 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1998:621324 HCAPLUS
DOCUMENT NUMBER: 129:240848
TITLE: Increasing the efficiency of uptake of transforming DNA complexes with polycations using peptides
INVENTOR(S): Hawley-Nelson, Pamela; Lan, Jianqing; Shih, Pojen; Jessee, Joel A.; Ciccarone, Valentina C.; Evans, Krista L.; Schifferli, Kevin P.; Gebeyehu, Guililat
PATENT ASSIGNEE(S): Life Technologies, Inc., USA
SOURCE: PCT Int. Appl., 105 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 5
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9840502	A1	19980917	WO 1998-US5232	19980316
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
US 6051429	A	20000418	US 1997-818200	19970314
AU 9865622	A1	19980929	AU 1998-65622	19980316
EP 1007699	A1	20000614	EP 1998-911737	19980316
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2001517939	T2	20011009	JP 1998-539899	19980316

PRIORITY APPLN. INFO.:

US 1997-818200	A	19970314
US 1995-477354	B2	19950607
US 1996-658130	A2	19960604
WO 1998-US5232	W	19980316

AB A method of increasing the efficiency of transformation of eukaryotic cells using complexes of nucleic acids with polycations is decribed. The method uses peptide conjugates with nucleic acid-binding moieties, cationic lipids and dendrimers to complex the DNA. The peptides may be synthetic or derived from a cellular protein and may be further derivatized, e.g. by selective deprotection. The peptide may also be covalently linked to the transfection agent (lipid, cationic lipid or dendrimer). Inclusion of peptides or modified-peptides in transfection compns. or covalent attachment of peptides to transfection agents increases the efficiency of transfection. Methods for the prepn. of transfection compns. and methods of using these transfection compns. as intracellular delivery agents and extracellular targeting agents are also disclosed.

IT **213131-55-6P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(in prepn. spermine-contg. peptides; increasing efficiency of uptake of transforming DNA complexes with polycations using peptides)

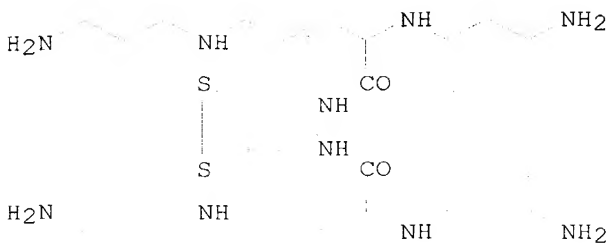
REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 13 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1998:268467 HCAPLUS
DOCUMENT NUMBER: 128:321804
TITLE: Preparation of spermine analogs for use as polyamine transport inhibitors
INVENTOR(S): Poulin, Richard; Audette, Marie; Charest-Gaudrealt, Rene
PATENT ASSIGNEE(S): Universite Laval, Can.; Poulin, Richard; Audette, Marie; Charest-Gaudrealt, Rene
SOURCE: PCT Int. Appl., 86 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9817623	A2	19980430	WO 1997-IB1651	19971022
WO 9817623	A3	19980903		
W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
US 6083496	A	20000704	US 1996-735130	19961022
CA 2241339	AA	19980430	CA 1997-2241339	19971022
AU 9857752	A1	19980515	AU 1998-57752	19971022
EP 876327	A2	19981111	EP 1997-953991	19971022
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				

PRIORITY APPLN. INFO.: US 1996-735130 A 19961022
WO 1997-IB1651 W 19971022
OTHER SOURCE(S): MARPAT 128:321804
GI

Dimers of spermine not same Compound



AB Spermine analogs, such as R1NHCR2R3(CH2)wNH(CH2)xCH(CONHR)(CH2)yNH(CH2)zCR 2R3NHR1 [R = H, moiety which cannot be captured by polyamine transporter; R1 = R2 = R3 = H, alkyl; w = 2, 3; z = 2, 3; x = integer from 1 to n; n = integer from 3 to 6; yr = n minus x], were prepd. for therapeutic use as novel inhibitors of polyamine transport. The main feature of this class of transport inhibitors is to incorporate a linker or side chain that prevents the uptake of polyamines and helps to conjugate polyamine analogs to form dimers with high inhibitory potency against polyamine uptake. These new compds. incorporate features that were designed to maximize their chem. and metabolic stability and their ability to bind to the polyamine transporter, and to minimize their toxicity by preventing their absorption by the cells. The purpose of such inhibitors is to prevent the uptake or salvaging of circulating polyamines by rapidly proliferating cells such as tumor cells, in order to potentiate the effect of therapeutic inhibitors of polyamine biosynthesis such as Eflornithine. Thus, spermine analog I was prepd. starting from ornithine hydrochloride and cystamine dihydrochloride. Prepd. compds. underwent pharmacol. testing as well as testing to detn. inhibition of cell proliferation of tumor cell lines such as ZR-75-1 human breast cancer cells and CHO-K1 Chinese hamster ovary cells.

IT **119798-07-1P 206760-71-6P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. of spermine analogs for use as polyamine transport inhibitors)

L24 ANSWER 14 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1996:681591 HCAPLUS
DOCUMENT NUMBER: 126:42328
TITLE: 2,2'-Dithiobis(N-ethyl-spermine-5-carboxamide) is a high affinity, membrane-impermeant antagonist of the mammalian polyamine transport system
AUTHOR(S): Huber, Maria; Pelletier, Joele G.; Torossian, Krikor; Dionne, Patricia; Gamache, Isabelle; Charest-Gaudreault, Rene; Audette, Marie; Poulin, Richard
CORPORATE SOURCE: Laboratory Molecular Endocrinology, Laval University Medical Research Center, Ste. Foy, QC, G1V 4G2, Can.
SOURCE: Journal of Biological Chemistry (1996), 271(44), 27556-27563
CODEN: JBCHA3; ISSN: 0021-9258
PUBLISHER: American Society for Biochemistry and Molecular Biology
DOCUMENT TYPE: Journal
LANGUAGE: English

AB We have synthesized 2,2'-dithiobis(N-ethyl-spermine-5-carboxamide) (DESC), its thiol monomer (MESC), and the mixed MESC-cysteamine disulfide (DEASC) as potential inhibitors of polyamine transport in mammalian cells. DESC was the most potent antagonist of spermine transport in ZR-75-1 human breast cancer cells, with Ki values of 5.0.+-.0.7, 80.+-.31, and 16.+-.3

.mu.M for DESC, MESC, and DEASC, resp. DESC also strongly blocked putrescine and spermidine uptake in ZR-75-1 cells (Ki = 1.6.+-.0.5 and 2.7.+-.1.1 .mu.M, resp.). While DESC and MESC were purely competitive inhibitors of putrescine transport, DEASC was a mixed competitive/noncompetitive antagonist. Remarkably, DESC was virtually impermeant in ZR-75-1 cells despite its low Ki toward polyamine transport. The marked difference in affinity between DESC and MESC was essentially due to the tail-to-tail juxtaposition of two spermine-like structures, suggesting that dimeric ligands of the polyamine transporter might simultaneously interact with more than one binding site. While DESC strongly decreased the initial rate of [3H]spermidine transport, even a 40-fold molar excess of antagonist could not completely abolish intracellular spermidine accumulation. Moreover, as little as 0.3 .mu.M spermidine fully restored growth in ZR-75-1 cells treated with an inhibitor of polyamine biosynthesis in the presence of 50 .mu.M DESC, thus emphasizing the importance of uptake of trace amts. of exogenous polyamines. Thus, reducing the exogenous supply of polyamines with a potent competitive inhibitor may be kinetically inadequate to block replenishment of the polyamine pool in polyamine-depleted tumor cells that display high transport capacity. These results demonstrate that polyamine analogs cross-linked into a dimeric structure such as DESC interact with high affinity with the mammalian polyamine carrier without being used as substrates. These novel properties provide a framework for the design of specific irreversible inhibitors of the polyamine transporter, which should present advantages over competitive antagonists for an efficient blockade of polyamine transport in tumor cells.

IT **124076-28-4P 184896-03-5P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(dithiobis(ethylsperminecarboxamide) is a high affinity, membrane-impermeant antagonist of the mammalian polyamine transport system)

L24 ANSWER 15 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1996:506088 HCAPLUS
DOCUMENT NUMBER: 125:160332
TITLE: Lipopolyamines as transfection agents and pharmaceutical uses thereof
INVENTOR(S): Byk, Gerardo; Dubertret, Catherine; Scherman, Daniel
PATENT ASSIGNEE(S): Rhone-Poulenc Rorer S.A., Fr.
SOURCE: PCT Int. Appl., 36 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9617823	A1	19960613	WO 1995-FR1595	19951204
W: AM, AU, BB, BG, BR, BY, CA, CN, CZ, EE, FI, GE, HU, IS, JP, KG, KP, KR, KZ, LK, LR, LT, LV, MD, MG, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, TJ, TM, TT, UA, UG, US, UZ, VN				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
FR 2727679	A1	19960607	FR 1994-14596	19941205
FR 2727679	B1	19970103		
CA 2208184	AA	19960613	CA 1995-2208184	19951204
AU 9643072	A1	19960626	AU 1996-43072	19951204
AU 713662	B2	19991209		
EP 796240	A1	19970924	EP 1995-941760	19951204
EP 796240	B1	20010418		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE				

BR 9510080	A	19971230	BR 1995-10080		19951204
HU 77171	A2	19980302	HU 1997-1862		19951204
JP 10509958	T2	19980929	JP 1995-517358		19951204
IL 116251	A1	20001121	IL 1995-116251		19951204
AT 200662	E	20010515	AT 1995-941760		19951204
ES 2157351	T3	20010816	ES 1995-941760		19951204
CZ 289513	B6	20020213	CZ 1997-1711		19951204
SK 282601	B6	20021008	SK 1997-701		19951204
ZA 9510326	A	19960611	ZA 1995-10326		19951205
FI 9702366	A	19970604	FI 1997-2366		19970604
US 6107286	A	20000822	US 1997-849497		19970604
NO 9702566	A	19970605	NO 1997-2566		19970605

PRIORITY APPLN. INFO.: FR 1994-14596 A 19941205
WO 1995-FR1595 W 19951204

OTHER SOURCE(S): MARPAT 125:160332

AB Cationic lipids H2N((CHR)mNH)nH [m=2-6; n=1-9; when n= 2-9 a single R grouping other than H is present in the general formula, and m has variable or identical values within the groupings (CHR)m or (CH2)m; R=H, (CHR5)pX'Y'CHR4XCHR3YR6; X, X'=O, (CH2)q where q=0-3, NH, NR' where R'=C1-4-alkyl; Y, Y'= CH2, CO, C=S; R3-R5=H, (substituted)C1-4-alkyl; p=0-5; R6=cholesterol deriv., NR1R2 where R1,R2=straight or branched, satd. or unsatd. C12-22 aliph. radical]. Pharmaceutical compns. contg. said lipids, and their uses for transfecting nucleic acids whether in vitro or in vivo in cells, are also disclosed.

IT **180266-01-7P 180266-03-9P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(lipopolyamines as transfection agents and pharmaceutical uses thereof)

L24 ANSWER 16 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1992:251305 HCAPLUS
DOCUMENT NUMBER: 116:251305
TITLE: Polyamine-linked Sepharoses: preparation and application to mammalian spermine synthase
AUTHOR(S): Shirahata, Akira; Zhu, Chang Lie; Akatsu, Sakae; Suzuki, Yasutoshi; Samejima, Keijiro
CORPORATE SOURCE: Fac. Pharm. Sci., Josai Univ., Sakado, 350-02, Japan
SOURCE: Protein Expression and Purification (1991), 2(4), 229-34
CODEN: PEXPEJ; ISSN: 1046-5928
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Seven different polyamine-linked Sepharose derivs. were prepd. for the affinity chromatog. of spermidine and spermine binding macromols.: spermine synthase from rat and hog brain was used as a model protein with a spermidine binding site. Comparative studies of the affinities of the enzymes for the 7 matrixes suggested that 2 neg. charges, 3 to 4 methylene groups apart, should be present at the decarboxylated S-adenosylmethionine binding site and should improve the binding of the enzyme to the Sepharose deriv. Two neg. charges at the spermidine binding site would be expected to do the same. Three affinity matrixes linked with 1,17-diamino-4,9,14-triazaheptadecane, 1,21-diamino-4,9,13,18-tetraazaheneicosane, or 5-sperminecarboxylic acid had an affinity for spermine synthases higher than that of spermine-Sepharose, which has been used for the purifn. of spermine synthase. The first of these matrixes was used and proved to be effective for the purifn.

IT **141136-46-1P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction with benzylcarbonyl chloride)

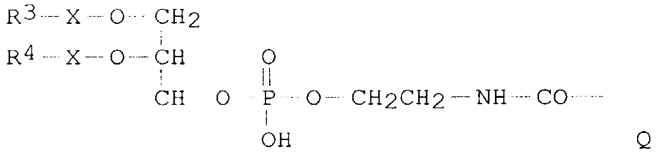
L24 ANSWER 17 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1991:246827 HCAPLUS

DOCUMENT NUMBER: 114:246827
TITLE: Preparation of spermine carboxamides containing fatty acyl or fatty alkyl moieties: transfection of eukaryotes
INVENTOR(S): Behr, Jean Paul; Loeffler, Jean Philippe
PATENT ASSIGNEE(S): Centre National de la Recherche Scientifique, Fr.
SOURCE: Eur. Pat. Appl., 10 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 394111	A1	19901024	EP 1990-401020	19900413
EP 394111	B1	19970604		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
FR 2645866	A1	19901019	FR 1989-5037	19890417
FR 2645866	B1	19910705		
FR 2646161	A1	19901026	FR 1989-9933	19890724
FR 2646161	B1	19910705		
CA 2014518	AA	19901017	CA 1990-2014518	19900412
IL 94077	A1	19941229	IL 1990-94077	19900412
AT 154035	E	19970615	AT 1990-401020	19900413
ES 2104593	T3	19971016	ES 1990-401020	19900413
JP 02292246	A2	19901203	JP 1990-99472	19900417
US 5171678	A	19921215	US 1990-509788	19900417
US 5476962	A	19951219	US 1994-191068	19940203
US 5616745	A	19970401	US 1995-477690	19950607

PRIORITY APPLN. INFO.: FR 1989-5037 19890417
US 1990-509788 19900417
US 1992-922887 19920731
US 1994-191068 19940203

OTHER SOURCE(S): MARPAT 114:246827
GI



AB H2N[(CHR)mNH]nH [n = 1-5 integer; m = 2-6 integer; R = H, R1R2NCOCHR5NHCO; R1, R2 = C12-22-aliph. radical; R5 = H, (phenyl)C1-4-alkyl, Q; X = CH2, CO; R3, R4 = C11-21-aliph. radical] and their analogs and salts were prepd. H2N(CH2)3NH(CH2)3CH(CO2H)N((CO2CMe3)(CH2)3NH2 (prepn. given) was condensed with H2NCH2CON[(CH2)17Me]2 in methylene chloride contg. dicyclohexylcarbodiimide to give, after deprotection with CF3CO2H, H2N(CH2)3NH(CH2)3CH[CONHCH2CON[(CH2)17Me]2]NH(CH2)3NH2.cntdot.4CF3CO2H (I). The transfection of melanotropic cells with a plasmid contg. a chloramphenicol acetyl transferase expression vector via incubation with I in Dulbecco Modified Essential Medium was studied.

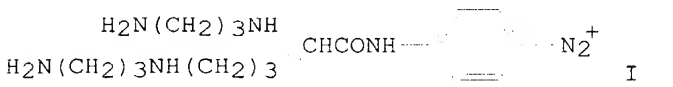
IT **133693-19-3P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and hydrogenation of)

IT **124076-28-4P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT

(Reactant or reagent)
(prepn. and tert-butoxycarbonylation of)

L24 ANSWER 18 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1990:1996 HCAPLUS
DOCUMENT NUMBER: 112:1996
TITLE: Efficient gene transfer into mammalian primary endocrine cells with lipopolyamine-coated DNA
AUTHOR(S): Behr, Jean Paul; Demeneix, Barbara; Loeffler, Jean Philippe; Perez-Mutul, Jose
CORPORATE SOURCE: Lab. Chim. Org. Phys., Inst. Le Bel, Strasbourg, F67000, Fr.
SOURCE: Proceedings of the National Academy of Sciences of the United States of America (1989), 86(18), 6982-6
CODEN: PNASA6; ISSN: 0027-8424
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A general and efficient transfection procedure, based on compacted lipopolyamine-coated plasmids, was developed. The active species is obtained by simple addn. of excess synthetic lipospermine soln. to the DNA. This binds within min to the cell membrane. This technique has been developed for endocrine cells of the intermediate lobe of the pituitary as a general tool for physiol. work on primary cells; it is not toxic and does not interfere with physiol. regulations in melanotrope cells. A variety of eukaryotic cell cultures also have been transfected successfully and exhibited transient and stable expression.
IT **124076-28-4P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and protection of)
IT **119798-07-1P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and redn. of)

L24 ANSWER 19 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1989:150519 HCAPLUS
DOCUMENT NUMBER: 110:150519
TITLE: Photohydrolysis of DNA by polyaminobenzenediazonium salts
AUTHOR(S): Behr, Jean Paul
CORPORATE SOURCE: Lab. Chim. Org. Phys., Inst. Le Bel, Strasbourg, 67000, Fr.
SOURCE: Journal of the Chemical Society, Chemical Communications (1989), (2), 101-3
CODEN: JCCCAT; ISSN: 0022-4936
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



I

AB The p-diazonium anilide of L-5-carboxyspermine (I) was prepd. and its effect in daylight-induced photocleavage of DNA of plasmid pBR322 was examd. Nanomolar concns. of the p-diazonium anilide of L-5-carboxyspermine cleaved DNA in daylight probably via a hydrolytic pathway. The I concn. needed to cleave the 4362 base pair long plasmid was 4.6 mM. The cleavage efficiency paralleled binding to DNA, the conc. at cleavage occurs being 10-8M for I. The photocleavage induced by I was

compared with that induced by the p-diazonium anilides of L-leucine and L-ornithine.

IT **119798-07-1P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and redn. of and butoxycarbonyl protection of)

=>
=>

=> fil reg
FILE 'REGISTRY' ENTERED AT 15:11:27 ON 23 FEB 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2004 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 22 FEB 2004 HIGHEST RN 652965-05-4
DICTIONARY FILE UPDATES: 22 FEB 2004 HIGHEST RN 652965-05-4

TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2003

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

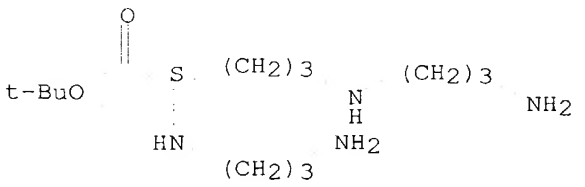
Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html

=>
=>

=> d ide can l19 1-18

L19 ANSWER 1 OF 18 REGISTRY COPYRIGHT 2004 ACS on STN
RN 561297-40-3 REGISTRY
CN **L-Ornithine, N2,N5-bis(3-aminopropyl)-, 1,1-dimethylethyl ester (9CI)** (CA INDEX NAME)
FS STEREOSEARCH
MF C15 H34 N4 O2
SR CA
LC STN Files: CA, CAPLUS, USPATFULL

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

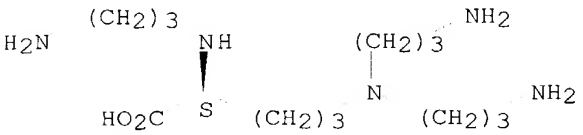
1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 139:122734

L19 ANSWER 2 OF 18 REGISTRY COPYRIGHT 2004 ACS on STN
RN 464925-99-3 REGISTRY
CN **L-Ornithine, N2,N5,N5-tris(3-aminopropyl)- (9CI)** (CA INDEX NAME)
FS STEREOSEARCH
MF C14 H33 N5 O2
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER

Absolute stereochemistry.



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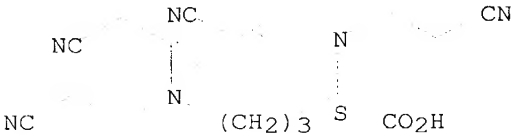
1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 137:273730

L19 ANSWER 3 OF 18 REGISTRY COPYRIGHT 2004 ACS on STN
RN 220170-84-3 REGISTRY
CN **L-Ornithine, N2,N2,N5,N5-tetrakis(2-cyanoethyl)-, monohydrochloride (9CI)** (CA INDEX NAME)
FS STEREOSEARCH
MF C17 H24 N6 O2 . Cl H
SR CA
LC STN Files: CA, CAPLUS, USPATFULL

Absolute stereochemistry.



● HCl

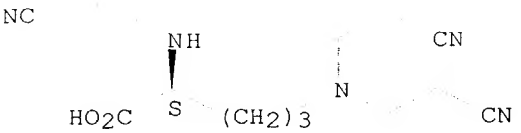
1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 130:153974

L19 ANSWER 4 OF 18 REGISTRY COPYRIGHT 2004 ACS on STN
RN 220170-83-2 REGISTRY
CN **L-Ornithine, N2,N5,N5-tris(2-cyanoethyl)-, monohydrochloride (9CI)** (CA INDEX NAME)
FS STEREOSEARCH

MF C14 H21 N5 O2 . Cl H
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

Absolute stereochemistry.



● HCl

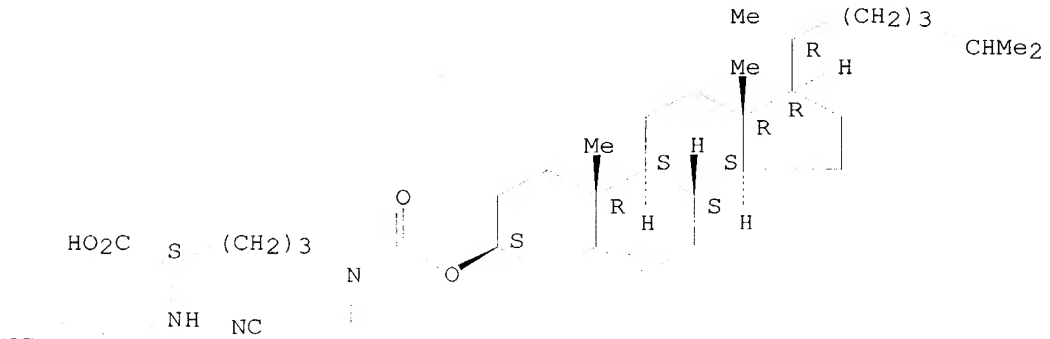
2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 137:273730

REFERENCE 2: 130:153974

L19 ANSWER 5 OF 18 REGISTRY COPYRIGHT 2004 ACS on STN
RN 214398-86-4 REGISTRY
CN **L-Ornithine, N5-[[(3.beta.)-cholest-5-en-3-yloxy]carbonyl]-N2,N5-bis(2-cyanoethyl)- (9CI)** (CA INDEX NAME)
FS STEREOSEARCH
MF C39 H62 N4 O4
SR CA
LC STN Files: CA, CAPLUS, USPATFULL

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

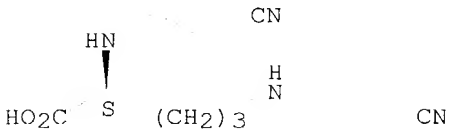
REFERENCE 1: 129:311677

REFERENCE 2: 129:306524

L19 ANSWER 6 OF 18 REGISTRY COPYRIGHT 2004 ACS on STN
RN 214398-85-3 REGISTRY

CN **L-Ornithine, N2,N5-bis(2-cyanoethyl)-, dihydrochloride (9CI)** (CA INDEX NAME)
FS STEREOSEARCH
MF C11 H18 N4 O2 . 2 Cl H
SR CA
LC STN Files: CA, CAPLUS, USPATFULL
CRN (119798-07-1)

Absolute stereochemistry.



●2 HCl

2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

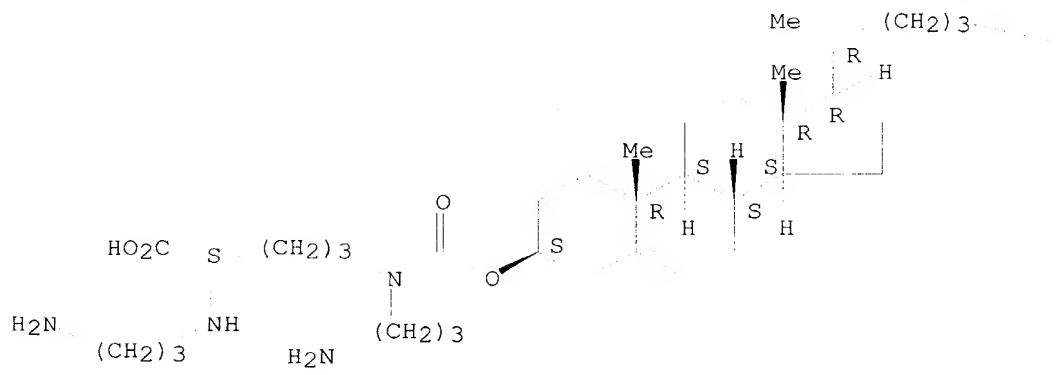
REFERENCE 1: 129:311677

REFERENCE 2: 129:306524

L19 ANSWER 7 OF 18 REGISTRY COPYRIGHT 2004 ACS on STN
RN 214398-52-4 REGISTRY
CN **L-Ornithine, N2,N5-bis(3-aminopropyl)-N5-[[(3.beta.)-cholest-5-en-3-yloxy]carbonyl]- (9CI)** (CA INDEX NAME)
FS STEREOSEARCH
MF C39 H70 N4 O4
SR CA
LC STN Files: CA, CAPLUS, USPATFULL

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

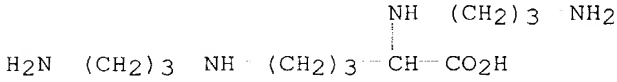
CHMe2

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 129:306524

L19 ANSWER 8 OF 18 REGISTRY COPYRIGHT 2004 ACS on STN
RN 213131-55-6 REGISTRY
CN **Ornithine, N2,N5-bis(3-aminopropyl)- (9CI)** (CA INDEX NAME)
FS 3D CONCORD
MF C11 H26 N4 O2
CI COM
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

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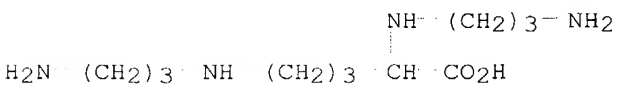
REFERENCE 2: 133:38223

REFERENCE 3: 132:334312

REFERENCE 4: 132:289590

REFERENCE 5: 129:240848

L19 ANSWER 9 OF 18 REGISTRY COPYRIGHT 2004 ACS on STN
RN 206760-71-6 REGISTRY
CN **Ornithine, N2,N5-bis(3-aminopropyl)-, monosodium salt (9CI)** (CA INDEX NAME)
MF C11 H26 N4 O2 . Na
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL
CRN (213131-55-6)

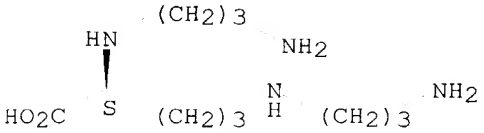


1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 128:321804

L19 ANSWER 10 OF 18 REGISTRY COPYRIGHT 2004 ACS on STN
RN 184896-03-5 REGISTRY
CN **L-Ornithine, N2,N5-bis(3-aminopropyl)-, monopotassium salt (9CI)** (CA INDEX NAME)
FS STEREOSEARCH
MF C11 H26 N4 O2 . K
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER
CRN (124076-28-4)

Absolute stereochemistry.



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1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

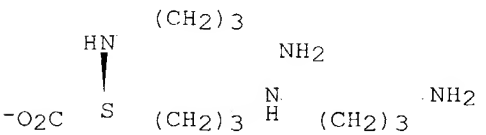
REFERENCE 1: 126:42328

L19 ANSWER 11 OF 18 REGISTRY COPYRIGHT 2004 ACS on STN
RN 180266-03-9 REGISTRY
CN **L-Ornithine, N2,N5-bis(3-aminopropyl)-, ion(1-), N,N,N-trimethylmethanaminium (9CI)** (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN **Methanaminium, N,N,N-trimethyl-, salt with N2,N5-bis(3-aminopropyl)-L-ornithine (1:1) (9CI)**
FS STEREOSEARCH
MF C11 H25 N4 O2 . C4 H12 N
SR CA
LC STN Files: CA, CAPLUS, USPATFULL

CM 1

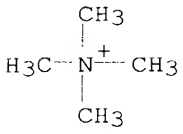
CRN 180266-02-8
CMF C11 H25 N4 O2

Absolute stereochemistry.



CM 2

CRN 51-92-3
CMF C4 H12 N

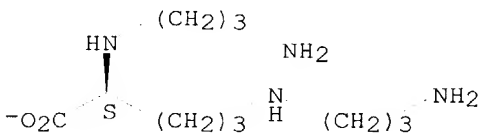


1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 125:160332

L19 ANSWER 12 OF 18 REGISTRY COPYRIGHT 2004 ACS on STN
RN 180266-02-8 REGISTRY
CN **L-Ornithine, N2,N5-bis(3-aminopropyl)-, ion(1-) (9CI)** (CA INDEX NAME)
FS STEREOSEARCH
MF C11 H25 N4 O2
CI COM
SR CA

Absolute stereochemistry.

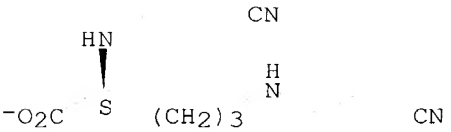


L19 ANSWER 13 OF 18 REGISTRY COPYRIGHT 2004 ACS on STN
RN 180266-01-7 REGISTRY
CN **L-Ornithine, N2,N5-bis(2-cyanoethyl)-, ion(1-), N,N,N-trimethylmethanaminium (9CI)** (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN **Methanaminium, N,N,N-trimethyl-, salt with N2,N5-bis(2-cyanoethyl)-L-ornithine (1:1) (9CI)**
FS STEREOSEARCH
MF C11 H17 N4 O2 . C4 H12 N
SR CA
LC STN Files: CA, CAPLUS, USPATFULL

CM 1

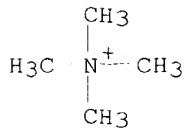
CRN 180266-00-6
CMF C11 H17 N4 O2

Absolute stereochemistry.



CM 2

CRN 51-92-3
CMF C4 H12 N

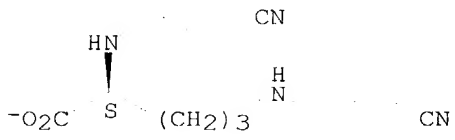


1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 125:160332

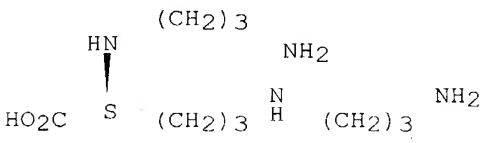
L19 ANSWER 14 OF 18 REGISTRY COPYRIGHT 2004 ACS on STN
RN 180266-00-6 REGISTRY
CN **L-Ornithine, N2,N5-bis(2-cyanoethyl)-, ion(1-) (9CI)** (CA INDEX NAME)
FS STEREOSEARCH
MF C11 H17 N4 O2
CI COM
SR CA

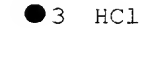
Absolute stereochemistry.



L19 ANSWER 15 OF 18 REGISTRY COPYRIGHT 2004 ACS on STN
RN 141136-46-1 REGISTRY
CN **L-Ornithine, N2,N5-bis(3-aminopropyl)-, trihydrochloride (9CI)** (CA INDEX NAME)
FS STEREOSEARCH
MF C11 H26 N4 O2 . 3 Cl H
SR CA
LC STN Files: CA, CAPLUS
CRN (124076-28-4)

Absolute stereochemistry.





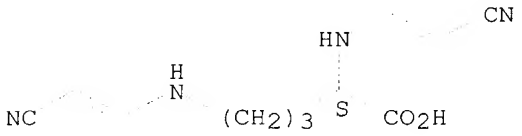
1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 116:251305

L19 ANSWER 16 OF 18 REGISTRY COPYRIGHT 2004 ACS on STN
RN 133693-19-3 REGISTRY

CN **L-Ornithine, N2,N5-bis(2-cyanoethenyl)- (9CI)** (CA INDEX NAME)
FS STEREOSEARCH
MF C11 H14 N4 O2
SR CA
LC STN Files: CA, CAPLUS, USPATFULL

Absolute stereochemistry.
Double bond geometry unknown.



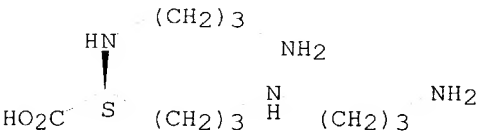
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 114:246827

L19 ANSWER 17 OF 18 REGISTRY COPYRIGHT 2004 ACS on STN
RN 124076-28-4 REGISTRY
CN **L-Ornithine, N2,N5-bis(3-aminopropyl)- (9CI)** (CA INDEX NAME)
FS STEREOSEARCH
MF C11 H26 N4 O2
CI COM
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

5 REFERENCES IN FILE CA (1907 TO DATE)
5 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 133:34433

REFERENCE 2: 131:307091

REFERENCE 3: 126:42328

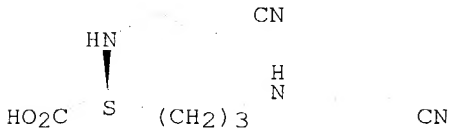
REFERENCE 4: 114:246827

REFERENCE 5: 112:1996

L19 ANSWER 18 OF 18 REGISTRY COPYRIGHT 2004 ACS on STN
RN 119798-07-1 REGISTRY
CN **L-Ornithine, N2,N5-bis(2-cyanoethyl)- (9CI)** (CA INDEX NAME)
FS STEREOSEARCH
MF C11 H18 N4 O2

CI COM
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

5 REFERENCES IN FILE CA (1907 TO DATE)
5 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 133:38223

REFERENCE 2: 131:307091

REFERENCE 3: 128:321804

REFERENCE 4: 112:1996

REFERENCE 5: 110:150519

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USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)
```



```
FILE COVERS 1907 - 23 Feb 2004  VOL 140 ISS 9
FILE LAST UPDATED: 22 Feb 2004  (20040222/ED)

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.


=>
=>

=> d stat que
L16             STR

N   C   C   C   N   C   C   C   C   N   C   C   C   N
1   2   3   4   5   6   7   8   20  9   10  11  12  13


NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  14

STEREO ATTRIBUTES: NONE
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L19            18 SEA FILE=REGISTRY ABB=ON  PLU=ON  L18 AND (LYSINE? OR ORNITHINE
                  ? OR HISTIDINE?)
L21           397 SEA FILE=REGISTRY ABB=ON  PLU=ON  SPERMIN?
L23           819 SEA FILE=REGISTRY ABB=ON  PLU=ON  SURFACT?
L24            19 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L19
L25          3816 SEA FILE=REGISTRY ABB=ON  PLU=ON  L18 NOT L19
L26        125350 SEA FILE=REGISTRY ABB=ON  PLU=ON  (LYSINE? OR ORNITHINE? OR
                  HISTIDINE?)
L27         10194 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L25
L28        286228 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L26 OR ?LYSIN? OR LYS OR
                  ?ORNITH? OR ORN OR HISTIDIN?
L30           571 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L27 (L) L28
L31         29874 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L21 OR SPERMIN?
L32       2287108 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L23 OR ?SURFAC?
L36           562 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L30 AND L31
L37             4 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L36 AND L32
L38             4 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L37 NOT L24
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=> d ibib abs hitrn l38 1-4

L38 ANSWER 1 OF 4 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1999:686600 HCAPLUS
DOCUMENT NUMBER: 131:303431
TITLE: Separation of active complexes such as polynucleotide-transfecting component complexes
INVENTOR(S): Szoka, Francis C., Jr.; Xu, Yuhong; Wang, Jinkang
PATENT ASSIGNEE(S): The Regents of the University of California, USA
SOURCE: U.S., 16 pp., Cont.-in-part of U.S. Ser. No. 92,200, abandoned.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 7
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5972600	A	19991026	US 1995-482110	19950607
EP 1236473	A2	20020904	EP 2002-1408	19930405
EP 1236473	A3	20030115		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE				
US 6113946	A	20000905	US 1995-469433	19950606
US 5661025	A	19970826	US 1995-480463	19950607
US 5990089	A	19991123	US 1995-486826	19950607
US 5811406	A	19980922	US 1995-482254	19950609
CA 2223934	AA	19961219	CA 1996-2223934	19960528
WO 9640264	A1	19961219	WO 1996-US7824	19960528
W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML				
AU 9660248	A1	19961230	AU 1996-60248	19960528
AU 714526	B2	20000106		
EP 831923	A1	19980401	EP 1996-917839	19960528
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2001517061	T2	20011002	JP 1997-500774	19960528
JP 2004000245	A2	20040108	JP 2003-200068	20030722

PRIORITY APPLN. INFO.:

US 1992-864876	B2	19920403
US 1992-913669	B2	19920714
US 1993-92200	B2	19930714
EP 1993-909508	A3	19930405
JP 1993-517793	A3	19930405
US 1995-482110	A2	19950607
US 1995-485430	A2	19950607
WO 1996-US7824	W	19960528

AB The invention separates defined, active complexes by a characteristic from defined, active complexes that share a particular physicochem. characteristic such as d., **surface** charge or particle size are sepd. from complexes formed by the assocn. of a polynucleotide with a transfecting component that increases transfection activity, such as a lipid, cationic lipid, liposome, peptide, cationic peptide, dendrimer or polycation. In a preferred embodiment, polynucleotide-transfecting component complexes are ultracentrifuged to resolve one or more bands corresponding to complexes having a specific polynucleotide-transfecting component interaction. Polynucleotide complexes having a cationic

liposome transfecting component resolve into two primary bands corresponding to complexes formed either under excess lipid conditions or under excess polynucleotide conditions. In an alternate embodiment, polynucleotide-transfecting component complexes are resolved using cross-flow electrophoresis to identify complexes having specific interactions and to sep. them from excess initial components. An example is give for the prepn of **spermine**-5-carboxyglycin (N'-stearyl-N'-oleyl)amide.

IT **124050-78-8**, Glycinamide, N2,N5-bis(3-aminopropyl)-L-**ornithyl**-N,N-dioctadecyl-, tetrakis(trifluoroacetate)
168479-03-6, Dospa
RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(sepn. of active complexes such as polynucleotide-transfecting component complexes)

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

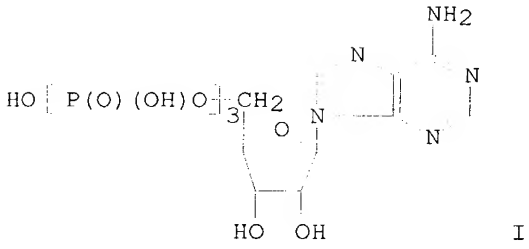
L38 ANSWER 2 OF 4 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1984:80914 HCAPLUS
DOCUMENT NUMBER: 100:80914
TITLE: Repair of oxygen-induced lung injury in adult rats. The role of ornithine decarboxylase and polyamines
AUTHOR(S): Thet, Lyn A.; Parra, Saundra C.; Shelburne, John D.
CORPORATE SOURCE: Med. Cent., Duke Univ., Durham, NC, USA
SOURCE: American Review of Respiratory Disease (1984), 129(1), 174-81
CODEN: ARDSBL; ISSN: 0003-0805
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The repair of lung injury in adult rats exposed to 100% O for 60 h and then placed in ambient air was studied. Lung **ornithine** decarboxylase (ODC) [**9024-60-6**] activity and polyamine (putrescine [110-60-1], spermidine [124-20-9], and **spermine** [**71-44-3**]) content during repair were correlated with changes in lung ultrastructure. The effect of **difluoromethylornithine** (DFMO) [**70052-12-9**], a selective irreversible ODC inhibitor, was also studied; ODC activity increased to 25-fold baseline 2 days after injury and returned to normal by 7 days. Polyamine content increased to 3-fold baseline during the 1st 3 days. During the same period, the no. of capillary endothelial cells and the capillary **surface** area almost doubled, and the no. of type 2 epithelial cells increased 2.5-fold. The DFMO treatment lowered ODC activities below baseline, reduced the increase in polyamine content, and also reduced the morphometric parameters described above to only 60-70% of the values during normal repair. It also caused a significant decrease in the no. of type 1 epithelial cells during repair, suggesting that deficient replacement by differentiating type 2 epithelial cells occurred. Thus, marked changes in lung ODC activity and polyamine content occur during the repair of O-induced injury to the lung and selective inhibition of these changes adversely affects repair.

IT **71-44-3**
RL: BIOL (Biological study)
(of lung, during hyperoxia-induced lung injury recovery)

L38 ANSWER 3 OF 4 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1981:436759 HCAPLUS
DOCUMENT NUMBER: 95:36759
TITLE: Diphtheria toxin:receptor interaction. Characterization of the receptor interaction with the nucleotide-free toxin, the nucleotide-bound toxin, and the B-fragment of the toxin
AUTHOR(S): Proia, Richard L.; Eidels, Leon; Hart, David A.

CORPORATE SOURCE: Health Sci. Cent., Univ. Texas, Dallas, TX, 75235, USA
SOURCE: Journal of Biological Chemistry (1981), 256(10), 4991-7
CODEN: JBCHA3; ISSN: 0021-9258
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



I

AB A no. of polycationic mols. were tested for their effect on the interaction between diphtheria toxin and a solubilized diphtheria toxin-binding cell **surface** glycoprotein (receptor). Such polycationic proteins as histones and protamine were inhibitory, whereas lysozyme [9001-63-2] was not. Putrescine [110-60-1] was without effect, spermidine [124-20-9] was mildly inhibitory, and **spermine** [**71-44-3**] was a potent inhibitor. Poly(L-**ornithine**) [**25104-12-5**] and ruthenium red [11103-72-3], which are known to block toxin-mediated cytotoxicity, were also effective inhibitors. Utilizing poly(L-**lysine**) [**25104-18-1**] of defined sizes, chain lengths of >4 **lysines** were necessary for inhibition. The isolated B-fragment of diphtheria toxin binds to the solubilized diphtheria toxin receptor and this binding is inhibited by the polyanion ATP (I) [56-65-5]. In addn., the form of diphtheria toxin which is free of an endogenous nucleotide-like mol. binds to the solubilized diphtheria toxin receptor. This binding is inhibited by exogenous ATP. In contrast, the form of the toxin that contains the unidentified nucleotide-like mol. does not bind to this cell **surface** receptor. That this latter observation is relevant to the functional receptor on cells was demonstrated by cytotoxicity expts. The amt. of nucleotide-bound form required to inhibit protein synthesis by 50% was .apprx.700-fold greater than the amt. of nucleotide-free toxin required to achieve the same level of inhibition. These observations are consistent with a model in which: (1) the exogenous polyphosphate (e.g. ATP), the endogenous nucleotide, and a putative anionic toxin-binding site on the receptor bind to the cationic phosphate-binding site (P-site) on the B-fragment of the diphtheria toxin mol., and (2) the polycationic mols. inhibit toxin:receptor interaction by competing with the toxin for the putative anionic binding site on the receptor.

IT **71-44-3**
RL: BIOL (Biological study)
(diphtheria toxin interaction with receptor inhibition by)

L38 ANSWER 4 OF 4 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1978:69461 HCAPLUS
DOCUMENT NUMBER: 88:69461
TITLE: Simulation of hormone effects by polycations
AUTHOR(S): Wolff, J.; Cook, G. H.
CORPORATE SOURCE: Natl. Inst. Arthritis, Metab. Dig. Dis., NIH, Bethesda, MD, USA
SOURCE: Endocrinology (1977), 101(6), 1767-75

CODEN: ENDOAO; ISSN: 0013-7227
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Steroidogenesis in Y-1 adrenal tumor and I-10 Leydig tumor cells was sensitive to **polylysine**-HBr [**25988-63-0**] of a wide mol. wt. range. At low concns. of polymer, there was a 5-10-fold stimulation of steroidogenesis in both cell lines. This was abolished at higher **polylysine** concns. With ds.p. >9-18, half-maximal stimulation occurred at .apprx.1 .times. 10-4M monomer concn., irrespective of mol. wt. Adenylate cyclase [9012-42-4] in partially purified membranes from Y-1 and I-10 cells was stimulated by **polylysines** which acted as partial agonists under these conditions (in contrast to steroidogenesis where responses were comparable to maximal effects obtained with ACTH1-24 [16960-16-0] or adenosine [58-61-7], resp.). Half-maximal stimulation for all mol. wts. of **polylysine** occurred at 5 .times. 10-4M when the level was expressed as the concn. of monomer. As in the case of steroidogenesis, RNase A [9001-99-4] was an effective stimulator, but **spermine** [**71-44-3**] stimulated only membranes and not intact cells. At concns. below those producing stimulation of steroidogenesis, **polylysine** inhibited ACTH1-24 stimulation of adenylate cyclase in a mixed competitive-noncompetitive manner. Apparently, nonspecific cationic interactions with the membrane can lead to **surface** changes that mimic effects produced by hormones.
IT **71-44-3**
RL: BIOL (Biological study)
(adenylate cyclase stimulation by, in adrenal and testis neoplasm membranes)

=> select hit rn 138 1-4
E1 THROUGH E3 ASSIGNED

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FILE 'REGISTRY' ENTERED AT 15:17:59 ON 23 FEB 2004
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STRUCTURE FILE UPDATES: 22 FEB 2004 HIGHEST RN 652965-05-4
DICTIONARY FILE UPDATES: 22 FEB 2004 HIGHEST RN 652965-05-4

TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2003

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Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html

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=>

=> s e1-e3
1 71-44-3/BI
(71-44-3/RN)

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             1 124050-78-8/BI
               (124050-78-8/RN)
             1 168479-03-6/BI
               (168479-03-6/RN)
L39          3 (71-44-3/BI OR 124050-78-8/BI OR 168479-03-6/BI)

=> d ide can 139 1-3

L39  ANSWER 1 OF 3  REGISTRY  COPYRIGHT 2004 ACS on STN
RN   168479-03-6  REGISTRY
CN   1-Propanaminium, N-[2-[[2,5-bis[(3-aminopropyl)amino]-1-
     oxopentyl]amino]ethyl]-N,N-dimethyl-2,3-bis[[(9Z)-1-oxo-9-octadecenyl]oxy]-
     , salt with trifluoroacetic acid (1:1) (9CI)  (CA INDEX NAME)
OTHER NAMES:
CN   2,3-Dioleoyloxy-N-[2-(sperminecarboxamido)ethyl]-N,N-dimethyl-1-
     propanaminium trifluoroacetate
CN   DOSPA
FS   STEREOSEARCH
DR   163046-76-2
MF   C54 H107 N6 O5 . C2 F3 O2
CI   COM
SR   CA
LC   STN Files:   BIOBUSINESS, CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL

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     CMF  C54 H107 N6 O5

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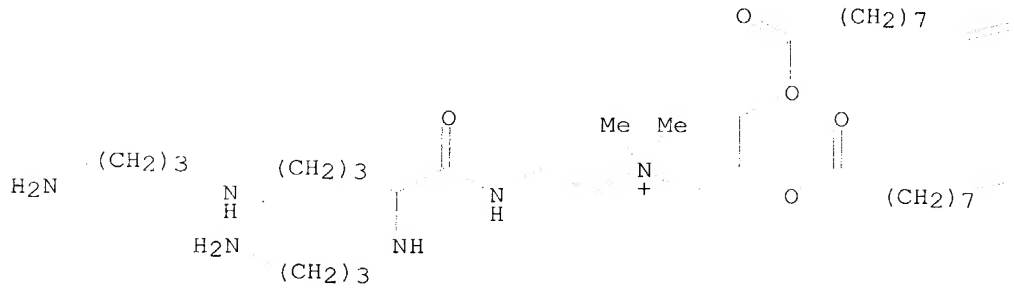

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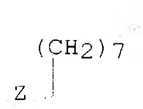

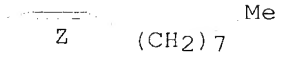

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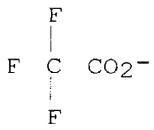

77 REFERENCES IN FILE CA (1907 TO DATE)
3 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
77 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 140:24099

REFERENCE 2: 140:19883

REFERENCE 3: 139:359868

REFERENCE 4: 139:287300

REFERENCE 5: 139:26604

REFERENCE 6: 138:384141

REFERENCE 7: 138:243090

REFERENCE 8: 138:210277

REFERENCE 9: 137:274019

REFERENCE 10: 137:243037

L39 ANSWER 2 OF 3 REGISTRY COPYRIGHT 2004 ACS on STN
RN **124050-78-8** REGISTRY
CN Glycinamide, N2,N5-bis(3-aminopropyl)-L-ornithyl-N,N-dioctadecyl-, tetrakis(trifluoroacetate) (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C49 H102 N6 O2 . 4 C2 H F3 O2
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

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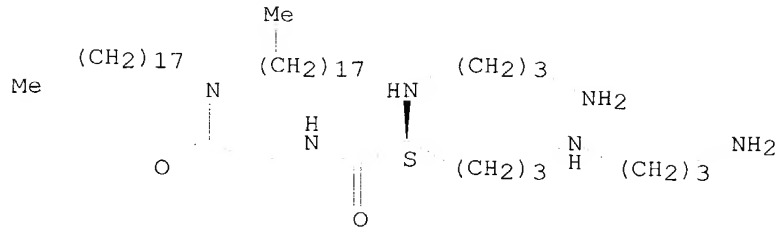
Absolute stereochemistry.



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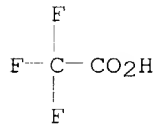

4 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
4 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 131:303431

REFERENCE 2: 129:265462

REFERENCE 3: 114:246827

REFERENCE 4: 112:1996

L39 ANSWER 3 OF 3 REGISTRY COPYRIGHT 2004 ACS on STN
RN **71-44-3** REGISTRY
CN 1,4-Butanediamine, N,N'-bis(3-aminopropyl)- (8CI, 9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Spermine (6CI)
OTHER NAMES:
CN 1,5,10,14-Tetraazatetradecane
CN 4,9-Diazadodecane-1,12-diamine
CN Gerontine
CN Musculamine
CN N,N'-Bis(3-aminopropyl)-1,4-butanediamine
CN N,N'-Bis(3-aminopropyl)-1,4-tetramethylenediamine
CN Neuridine
CN NSC 268508
CN Spermin
FS 3D CONCORD
DR 115-04-8
MF C10 H26 N4
CI COM

LC STN Files: ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DETHERM*, DRUGU, EMBASE, GMELIN*, HODOC*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, NIOSHTIC, PIRA, PROMT, RTECS*, SPECINFO, SYNTHLINE, TOXCENTER, USPAT2, USPATFULL, VETU
(*File contains numerically searchable property data)
Other Sources: EINECS**, NDSL**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

$H_2N-(CH_2)_3-NH-(CH_2)_4-NH-(CH_2)_3-NH_2$

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

8394 REFERENCES IN FILE CA (1907 TO DATE)
258 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
8402 REFERENCES IN FILE CAPLUS (1907 TO DATE)
106 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:128590

REFERENCE 2: 140:127343

REFERENCE 3: 140:125363

REFERENCE 4: 140:125025

REFERENCE 5: 140:124341

REFERENCE 6: 140:122320

REFERENCE 7: 140:111403

REFERENCE 8: 140:109062

REFERENCE 9: 140:108160

REFERENCE 10: 140:107903

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FILE LAST UPDATED: 22 Feb 2004  (20040222/ED)

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 substance identification.

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L16             STR

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1   2   3   4   5   6   7   8   20  9   10  11  12  13

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DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  14

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L32      2287108 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L23 OR ?SURFAC?
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L37            4 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L36 AND L32
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L48  ANSWER 1 OF 4  HCAPLUS  COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER:         2002:185153  HCAPLUS
DOCUMENT NUMBER:          136:247892
TITLE:                    Method for binding, in solution, a peptide and a
                          lipophilic vector and uses thereof
INVENTOR(S):              Bonnet, Dominique; Bourel, Line; Melnyk, Oleg
PATENT ASSIGNEE(S):       Institut Pasteur de Lille, Fr.; Centre National de la
                          Recherche Scientifique (CNRS)
SOURCE:                   PCT Int. Appl., 56 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 French
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.          KIND  DATE          APPLICATION NO.  DATE
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     WO 2002020558       A2    20020314      WO 2001-FR2787   20010907
     WO 2002020558       A3    20030109
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             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
             GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
             LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL,
             PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG,
             US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
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             BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
     FR 2813794          A1    20020315      FR 2000-11451    20000908
     FR 2813794          B1    20030124
     AU 2001087832       A5    20020322      AU 2001-87832    20010907
     EP 1315739          A2    20030604      EP 2001-967454   20010907
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
PRIORITY APPLN. INFO.:                    FR 2000-11451    A  20000908
                                          WO 2001-FR2787   W  20010907
OTHER SOURCE(S):          CASREACT 136:247892; MARPAT 136:247892
AB   The invention concerns a method for binding, in soln., a peptide compn.
     and a lipophilic vector bearing an aldehyde function via formation of a
     hydrazone bond.  The lipopeptides obtained by this method have biol.
     applications, e.g., in screening of cells.  Thus, peptide
     H-K(COCH2NHNH2)IRVVHQLLPESSLRKRKRSR-NH2 (MuIFN.gamma. a) was prepd. and
     treated with lipophilic vector Me(CH2)14CONH(CH2)3NHCOCHO to form the
     hydrazone deriv.  Expression of class II major histocompatibility complex
     on the surface of COLO 205 cells, induced by incubation with lipopeptides
     of the invention, was analyzed.
IT   403856-82-6P 403856-84-8P
     RL: BSU (Biological study, unclassified); SPN (Synthetic preparation);
     BIOL (Biological study); PREP (Preparation)
        (method for binding in soln. of a peptide and a lipophilic vector)
IT   403856-67-7P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
     (Reactant or reagent)
        (method for binding in soln. of a peptide and a lipophilic vector)
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IT **197906-39-1P**, Tartaric acid
RL: SPN (Synthetic preparation); PREP (Preparation)
(method for binding in soln. of a peptide and a lipophilic vector)

L48 ANSWER 2 OF 4 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:903794 HCAPLUS
DOCUMENT NUMBER: 136:58784
TITLE: Encapsulation of plasmid DNA (Lipogenes) and therapeutic agents with nuclear localization signal/fusogenic peptide conjugates into targeted liposome complexes
INVENTOR(S): Boulikas, Teni
PATENT ASSIGNEE(S): USA
SOURCE: PCT Int. Appl., 107 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001093836	A2	20011213	WO 2001-US18657	20010608
WO 2001093836	A3	20021003		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1292284	A2	20030319	EP 2001-942131	20010608
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
US 2003072794	A1	20030417	US 2001-876904	20010608
JP 2003535832	T2	20031202	JP 2002-501409	20010608

PRIORITY APPLN. INFO.: US 2000-210925P P 20000609
WO 2001-US18657 W 20010608

AB A method is disclosed for encapsulating plasmids, oligonucleotides or neg.-charged drugs into liposomes having a different lipid compn. between their inner and outer membrane bilayers and able to reach primary tumors and their metastases after i.v. injection to animals and humans. The formulation method includes complex formation between DNA with cationic lipid mols. and fusogenic/NLS peptide conjugates composed of a hydrophobic chain of about 10-20 amino acids and also contg. four or more histidine residues or NLS at their one end. The encapsulated mols. display therapeutic efficacy in eradicating a variety of solid human tumors including but not limited to breast carcinoma and prostate carcinoma. Combination of the plasmids, oligonucleotides or neg.-charged drugs with other anti-neoplastic drugs (the pos.-charged cis-platin, doxorubicin) encapsulated into liposomes are of therapeutic value. Also of therapeutic value in cancer eradication are combinations of the encapsulated plasmids, oligonucleotides or neg.-charged drugs with HSV-tk plus encapsulated ganciclovir.

IT **124050-77-7**
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(encapsulation of plasmid DNA (Lipogenes) and therapeutic agents with nuclear localization signal/fusogenic peptide conjugates into targeted liposome complexes)

IT **379719-25-2 379722-31-3**

RL: PAC (Pharmacological activity); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(encapsulation of plasmid DNA (Lipogenes) and therapeutic agents with nuclear localization signal/fusogenic peptide conjugates into targeted liposome complexes)

IT **71-44-3**, Spermine
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(encapsulation of plasmid DNA (Lipogenes) and therapeutic agents with nuclear localization signal/fusogenic peptide conjugates into targeted liposome complexes)

L48 ANSWER 3 OF 4 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2000:728698 HCAPLUS
DOCUMENT NUMBER: 134:91012
TITLE: Co-polymer of histidine and lysine markedly enhances transfection efficiency of liposomes
AUTHOR(S): Chen, Q-R.; Zhang, L.; Stass, S. A.; Mixson, A. J.
CORPORATE SOURCE: Department of Pathology and Greenebaum Cancer Center, University of Maryland Baltimore, Baltimore, MD, 21201, USA
SOURCE: Gene Therapy (2000), 7(19), 1698-1705
CODEN: GETHEC; ISSN: 0969-7128
PUBLISHER: Nature Publishing Group
DOCUMENT TYPE: Journal
LANGUAGE: English

Not Prior Art

AB Development of nonviral delivery systems is progressing toward a transfection efficiency sufficient to affect metabolic and neoplastic diseases in humans. Nevertheless, inadequate transfection efficiency of target cells with current nonviral systems still limits the utility of this therapy. In the current study, we have detd. that a co-polymer of histidine and lysine (H-K) enhances the transfection efficiency of liposomes, a leading nonviral system. We found that in the absence of serum, the addn. of this polymer increased transfection as much as 10-fold in comparison with the liposome:DNA complex alone. More impressively, the co-polymer in the presence of serum increased transfection efficiency up to 100-fold. Furthermore, in vivo expression of luciferase in a tumor increased 15-fold with the addn. of H-K polymer to the liposome:plasmid DNA complexes. Without liposomes, the H-K polymer had little to no effect on transfection efficiency. We anticipate that further modifications of this co-polymer will yield mols. with both increased complexity and transfection efficiency.

IT **158571-62-1**, Lipofectamine **178532-92-8**, DOSPER
RL: BPR (Biological process); BSU (Biological study, unclassified); MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(co-polymer of histidine and lysine enhances transfection efficiency of liposomes)

IT **316821-92-8P**
RL: BPR (Biological process); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)
(co-polymer of histidine and lysine enhances transfection efficiency of liposomes)

REFERENCE COUNT: 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L48 ANSWER 4 OF 4 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1989:590130 HCAPLUS
DOCUMENT NUMBER: 111:190130
TITLE: Substrate recognition determinants for rhodopsin kinase: studies with synthetic peptides, polyanions,

and polycations
AUTHOR(S): Palczewski, Krzysztof; Arendt, Anatol; McDowell, J. Hugh; Hargrave, Paul A.
CORPORATE SOURCE: Dep. Ophthalmol., Univ. Florida, Gainesville, FL, 32610, USA
SOURCE: Biochemistry (1989), 28(22), 8764-70
CODEN: BICHAW; ISSN: 0006-2960
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Rhodopsin kinase phosphorylated serine- and threonine-contg. peptides from the bovine rhodopsin C-terminal sequence. The Km values for the peptides decreased as the length of the peptide was increased over the range 12-31 amino acids, reaching 1.7 mM for peptide 318-348 from the rhodopsin sequence. The Km for phosphorylation of rhodopsin was .apprx.103 lower than that for the peptides, which suggested that binding of rhodopsin kinase to its substrate, photolyzed rhodopsin, involves more than just binding to the C-terminal peptide region that is to be phosphorylated. A synthetic peptide from the rhodopsin sequence that contains both serines and threonines was improved as a substrate by substitution of serines for the threonines, suggesting that serine residues are preferred as substrates. Analogous 25-amino-acid peptides from the human red or green cone visual pigment, a .beta.-adrenergic receptor, or an M1 muscarinic acetylcholine receptors were better substrates for bovine rhodopsin kinase than was the peptide from bovine rhodopsin. An acidic serine-contg. peptide from a non-receptor protein, .alpha.s1 .beta.-caseins, was also good substrate for rhodopsin kinase. However, many basic peptide that were substrates for other protein kinases, histone IIA, histone IIS, clupeine, salmine, and a neurofilament peptide, were not phosphoryalted by rhodopsin kinase. Polycations, such as spermine or spermidine, were nonessential activators of phosphorylation of rhodopsin or its synthetic peptide 324-348. Polyanions, such as poly(aspartic acid), dextran sulfate (or poly(adenylic acid) inhibited the kinase. Poly(L-aspartic acid) was a competitive inhibitor with respect to rhodopsin (Ki = 300 .mu.M) and showed mixed-type inhibition with respect to ATP.

IT **123152-19-2P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and rhodopsin kinase response to)

IT **71-44-3**, Spermine
RL: BIOL (Biological study)
(rhodopsin kinase response to)

=> select hit rn 148 1-4
E4 THROUGH E15 ASSIGNED

=> fil reg
FILE 'REGISTRY' ENTERED AT 15:27:02 ON 23 FEB 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 22 FEB 2004 HIGHEST RN 652965-05-4
DICTIONARY FILE UPDATES: 22 FEB 2004 HIGHEST RN 652965-05-4

TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2003

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html

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(71-44-3/RN)
1 123152-19-2/BI
(123152-19-2/RN)
1 124050-77-7/BI
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1 158571-62-1/BI
(158571-62-1/RN)
1 178532-92-8/BI
(178532-92-8/RN)
1 197906-39-1/BI
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1 316821-92-8/BI
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1 379719-25-2/BI
(379719-25-2/RN)
1 379722-31-3/BI
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1 403856-67-7/BI
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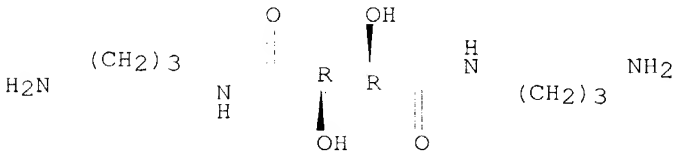
1 403856-82-6/BI
(403856-82-6/RN)
1 403856-84-8/BI
(403856-84-8/RN)
L49 12 (71-44-3/BI OR 123152-19-2/BI OR 124050-77-7/BI OR 158571-62-1/BI OR 178532-92-8/BI OR 197906-39-1/BI OR 316821-92-8/BI OR 379719-25-2/BI OR 379722-31-3/BI OR 403856-67-7/BI OR 403856-82-6/BI OR 403856-84-8/BI)

=> s l49 and l18
L50 5 L49 AND L18

=> d ide can l50 1-5

L50 ANSWER 1 OF 5 REGISTRY COPYRIGHT 2004 ACS on STN
RN **197906-39-1** REGISTRY
CN Butanediamide, N,N'-bis(3-aminopropyl)-2,3-dihydroxy-, [R-(R*,R*)]- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C10 H22 N4 O4
CI COM
SR CA
LC STN Files: CA, CAPLUS, CASREACT

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

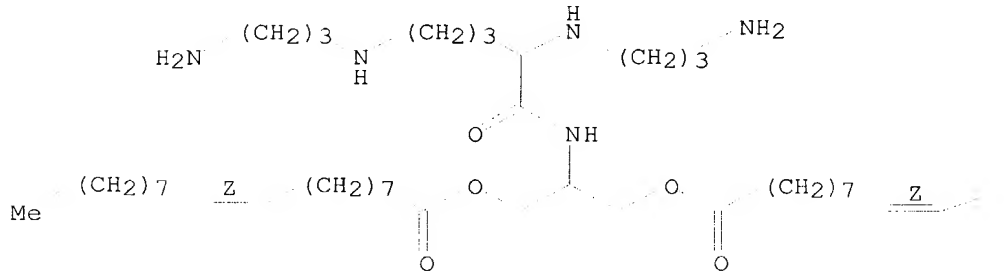
REFERENCE 1: 136:247892

REFERENCE 2: 127:331474

L50 ANSWER 2 OF 5 REGISTRY COPYRIGHT 2004 ACS on STN
RN **178532-92-8** REGISTRY
CN 9-Octadecenoic acid (9Z)-, 2-[[2,5-bis[(3-aminopropyl)amino]-1-oxopentyl]amino]-1,3-propanediyl ester (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 9-Octadecenoic acid (Z)-, 2-[[2,5-bis[(3-aminopropyl)amino]-1-oxopentyl]amino]-1,3-propanediyl ester
OTHER NAMES:
CN DOSPER
FS STEREOSEARCH
MF C50 H97 N5 O5
SR CA
LC STN Files: BIOSIS, CA, CAPLUS, IPA, TOXCENTER, USPATFULL

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B

(CH2)7
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PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

38 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
38 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 140:57982

REFERENCE 2: 139:328077

REFERENCE 3: 137:98996

REFERENCE 4: 137:83511

REFERENCE 5: 137:57284

REFERENCE 6: 136:395627

REFERENCE 7: 136:390857

REFERENCE 8: 136:336176

REFERENCE 9: 136:242909

REFERENCE 10: 136:241095

L50 ANSWER 3 OF 5 REGISTRY COPYRIGHT 2004 ACS on STN
RN **158571-62-1** REGISTRY
CN 1-Propanaminium, N-[3-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]-3-oxopropyl]-N,N-dimethyl-2,3-bis[[(9Z)-1-oxo-9-octadecenyl]oxy]-, salt with trifluoroacetic acid (1:1), mixt. with 1-[[[(2-aminoethoxy)hydroxyphosphinyl]oxy]methyl]-1,2-ethanediyl di-(9Z)-9-octadecenoate (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 1-Propanaminium, N-[3-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]-3-oxopropyl]-N,N-dimethyl-2,3-bis[(1-oxo-9-octadecenyl)oxy]-, (Z,Z)-, salt with trifluoroacetic acid (1:1), mixt. with (Z,Z)-1-[[[(2-aminoethoxy)hydroxyphosphinyl]oxy]methyl]-1,2-ethanediyl di-9-octadecenoate
CN 9-Octadecenoic acid (9Z)-, 1-[[[(2-aminoethoxy)hydroxyphosphinyl]oxy]methyl]-1,2-ethanediyl ester, mixt. contg. (9CI)
CN 9-Octadecenoic acid (Z)-, 2-deoxy-2-[(1-oxododecyl)amino]-, 1-[[[(2-aminoethoxy)hydroxyphosphinyl]oxy]methyl]-1,2-ethanediyl ester, mixt. contg.
OTHER NAMES:
CN LipofectAMINE
FS STEREOSEARCH
MF C54 H106 N5 O5 . C41 H78 N O8 P . C2 F3 O2
CI MXS
SR CA
LC STN Files: AGRICOLA, BIOSIS, BIOTECHNO, CA, CAPLUS, CIN, EMBASE, IPA, RTECS*, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)

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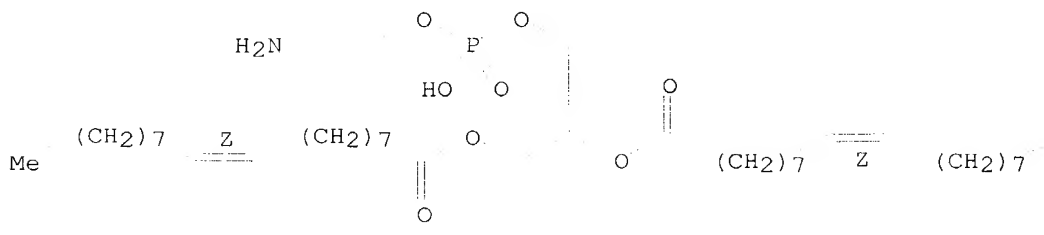
CRN 2462-63-7
CMF C41 H78 N O8 P

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B

Me

CM 2

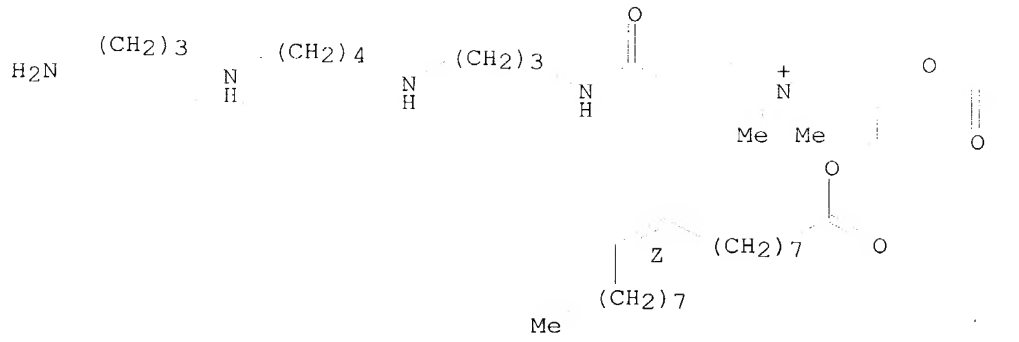
CRN 185097-43-2
CMF C54 H106 N5 O5 . C2 F3 O2

CM 3

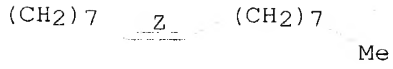
CRN 181508-68-9
CMF C54 H106 N5 O5

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B



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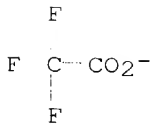
CRN 14477-72-6
CMF C2 F3 O2



304 REFERENCES IN FILE CA (1907 TO DATE)
12 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
305 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 140:117121

REFERENCE 2: 140:91562

REFERENCE 3: 140:88375

REFERENCE 4: 140:88364

REFERENCE 5: 140:53428

REFERENCE 6: 140:1965

REFERENCE 7: 140:701

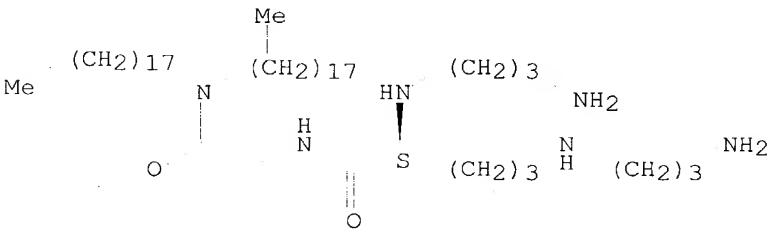
REFERENCE 8: 140:259

REFERENCE 9: 139:393051

REFERENCE 10: 139:369676

L50 ANSWER 4 OF 5 REGISTRY COPYRIGHT 2004 ACS on STN
RN **124050-77-7** REGISTRY
CN Glycinamide, N2,N5-bis(3-aminopropyl)-L-ornithyl-N,N-dioctadecyl- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN DOGS
CN DOGS (peptide)
CN Transfectam
FS STEREOSEARCH
MF C49 H102 N6 O2
CI COM
SR CA
LC STN Files: AGRICOLA, BIOBUSINESS, BIOSIS, CA, CANCERLIT, CAPLUS, DIOGENES, MEDLINE, PIRA, PROMT, TOXCENTER, USPAT2, USPATFULL

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

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10 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
125 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 139:235215

REFERENCE 2: 139:224472

REFERENCE 3: 139:202221

REFERENCE 4: 139:26604

REFERENCE 5: 138:406770

REFERENCE 6: 138:384141

REFERENCE 7: 138:379265

REFERENCE 8: 138:243023

REFERENCE 9: 138:112194

REFERENCE 10: 138:88638

L50 ANSWER 5 OF 5 REGISTRY COPYRIGHT 2004 ACS on STN
RN **71-44-3** REGISTRY
CN 1,4-Butanediamine, N,N'-bis(3-aminopropyl)- (8CI, 9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Spermine (6CI)
OTHER NAMES:
CN 1,5,10,14-Tetraazatetradecane
CN 4,9-Diazadodecane-1,12-diamine
CN Gerontine
CN Musculamine
CN N,N'-Bis(3-aminopropyl)-1,4-butanediamine
CN N,N'-Bis(3-aminopropyl)-1,4-tetramethylenediamine
CN Neuridine
CN NSC 268508
CN Spermin
FS 3D CONCORD
DR 115-04-8
MF C10 H26 N4
CI COM
LC STN Files: ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DETHERM*, DRUGU, EMBASE, GMELIN*, HODOC*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, NIOSHTIC, PIRA, PROMT, RTECS*, SPECINFO, SYNTHLINE, TOXCENTER, USPAT2, USPATFULL, VETU
(*File contains numerically searchable property data)
Other Sources: EINECS**, NDSL**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

8394 REFERENCES IN FILE CA (1907 TO DATE)
258 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
8402 REFERENCES IN FILE CAPLUS (1907 TO DATE)
106 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:128590

REFERENCE 2: 140:127343

REFERENCE 3: 140:125363

REFERENCE 4: 140:125025

REFERENCE 5: 140:124341

REFERENCE 6: 140:122320

REFERENCE 7: 140:111403

REFERENCE 8: 140:109062

REFERENCE 9: 140:108160

REFERENCE 10: 140:107903

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L50 5 S L49 AND L18
L51 7 S L49 NOT L50

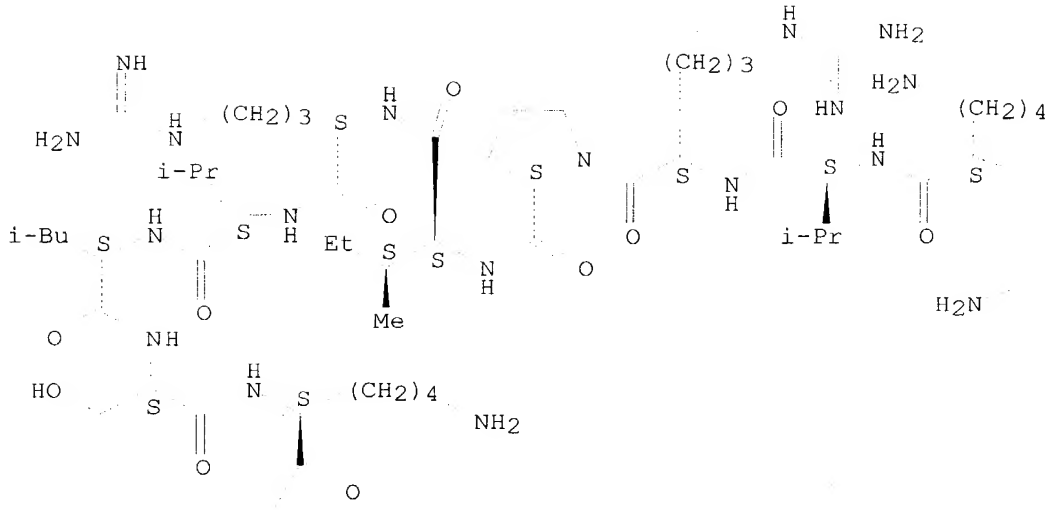
=> d ide can l51 1-7

L51 ANSWER 1 OF 7 REGISTRY COPYRIGHT 2004 ACS on STN
RN **403856-84-8** REGISTRY
CN L-Leucinamide, N6-[[[2-[[3-[[[[(3.beta.)-cholest-5-en-3-yl]oxy]carbonyl]amino]propyl]amino]-2-oxoethylidene]hydrazino]acetyl]-L-lysyl-L-seryl-L-leucyl-L-arginyl-L-seryl-L-.alpha.-glutamyl-L-arginyl-L-arginyl-L-histidyl-L-glutaminyl-L-lysyl-L-valyl-L-arginyl-L-prolyl-L-isoleucyl-L-arginyl-L-valyl-L-leucyl-L-seryl-L-lysyl- (9CI) (CA INDEX NAME)
FS PROTEIN SEQUENCE; STEREOSEARCH
MF C147 H261 N47 O31
SR CA
LC STN Files: CA, CAPLUS

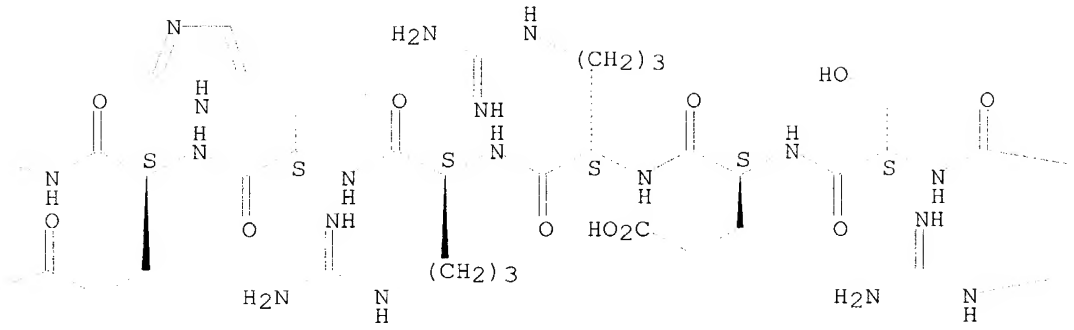
RELATED SEQUENCES AVAILABLE WITH SEQLINK

Absolute stereochemistry.
Double bond geometry unknown.

PAGE 1-A



PAGE 1-B



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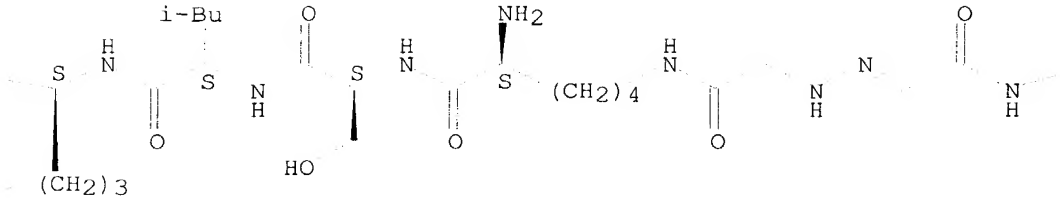

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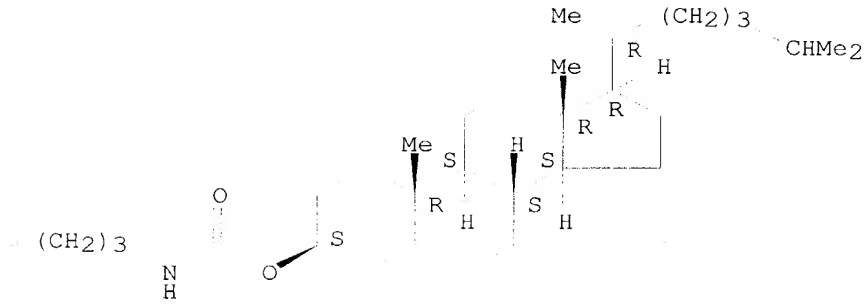
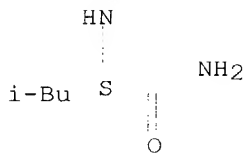


PAGE 2-A



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

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1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 136:247892

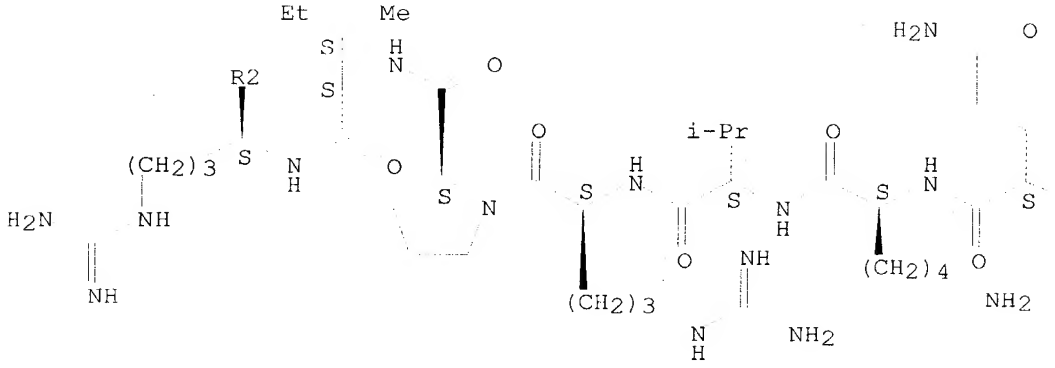
L51 ANSWER 2 OF 7 REGISTRY COPYRIGHT 2004 ACS on STN
RN **403856-82-6** REGISTRY
CN L-Leucinamide, N6-[[[2-oxo-2-[[3-[(1-oxohexadecyl)amino]propyl]amino]ethyl idene]hydrazino]acetyl]-L-lysyl-L-seryl-L-leucyl-L-arginyl-L-seryl-L-.alpha.-glutamyl-L-arginyl-L-arginyl-L-histidyl-L-glutaminyl-L-lysyl-L-valyl-L-arginyl-L-prolyl-L-isoleucyl-L-arginyl-L-valyl-L-leucyl-L-seryl-L-lysyl- (9CI) (CA INDEX NAME)

FS PROTEIN SEQUENCE; STEREOSEARCH
MF C135 H247 N47 O30
SR CA
LC STN Files: CA, CAPLUS

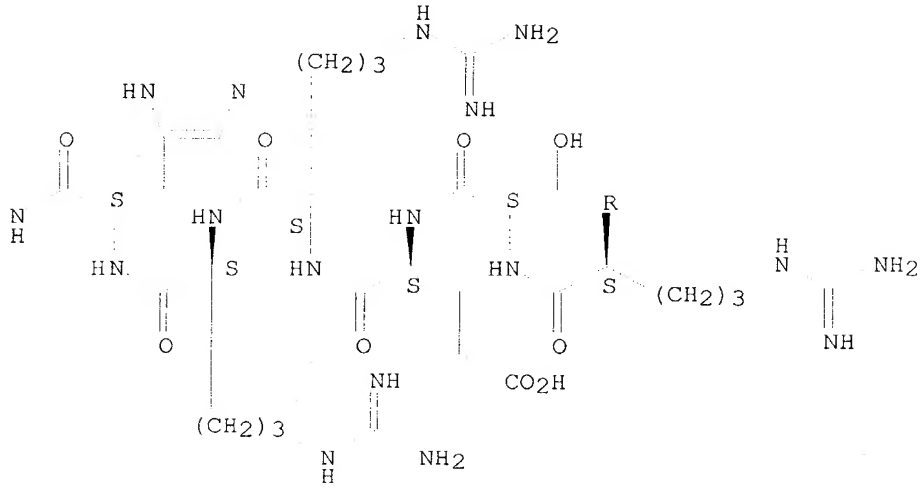
RELATED SEQUENCES AVAILABLE WITH SEQLINK

Absolute stereochemistry.
Double bond geometry unknown.

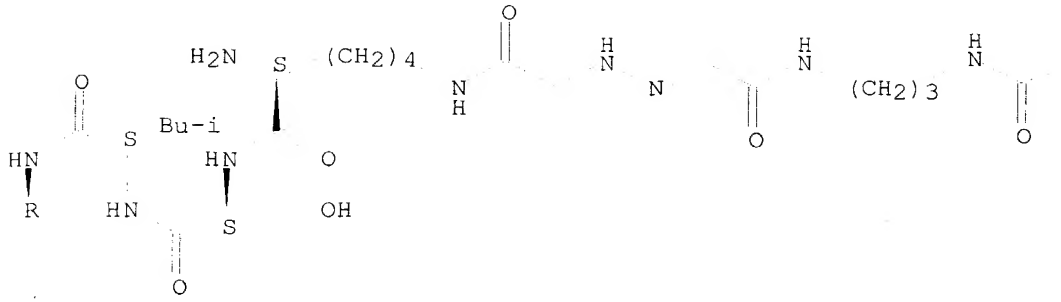
PAGE 1-A



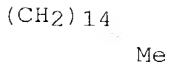
PAGE 1-B



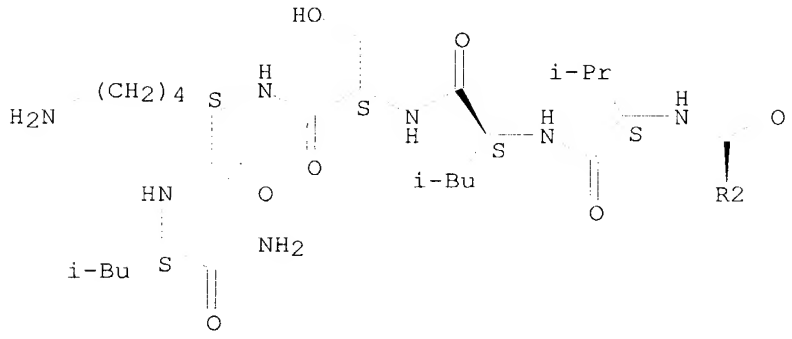
PAGE 2-A



PAGE 2-B



PAGE 3-A



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

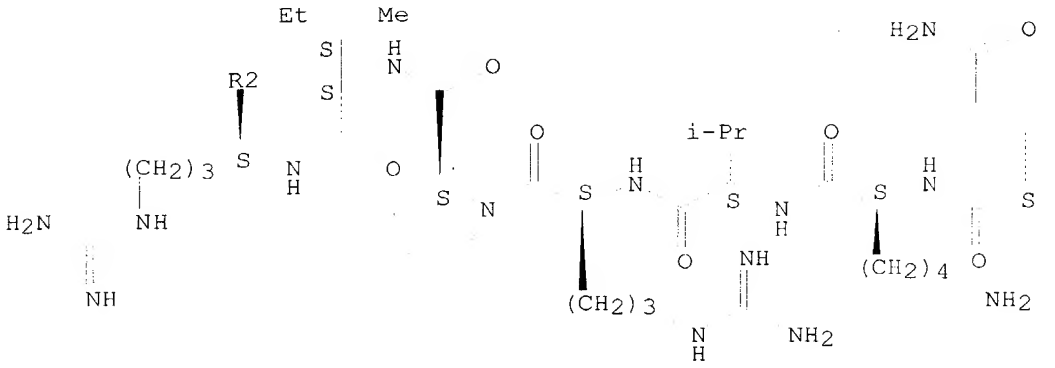
REFERENCE 1: 136:247892

L51 ANSWER 3 OF 7 REGISTRY COPYRIGHT 2004 ACS on STN
RN **403856-67-7** REGISTRY
CN L-Leucinamide, N6-(hydrazinoacetyl)-L-lysyl-L-seryl-L-leucyl-L-arginyl-L-seryl-L-.alpha.-glutamyl-L-arginyl-L-arginyl-L-histidyl-L-glutaminyl-L-lysyl-L-valyl-L-arginyl-L-prolyl-L-isoleucyl-L-arginyl-L-valyl-L-leucyl-L-seryl-L-lysyl- (9CI) (CA INDEX NAME)
FS PROTEIN SEQUENCE; STEREOSEARCH
MF C114 H209 N45 O28
SR CA
LC STN Files: CA, CAPLUS

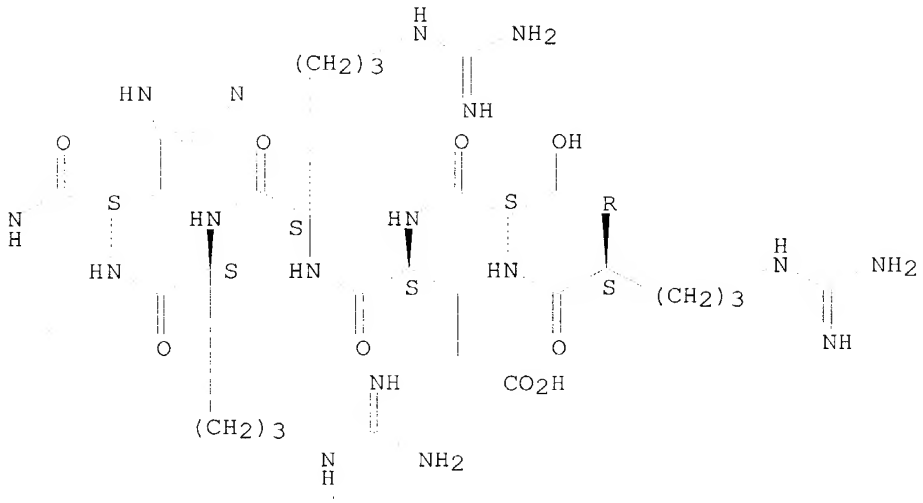
RELATED SEQUENCES AVAILABLE WITH SEQLINK

Absolute stereochemistry.

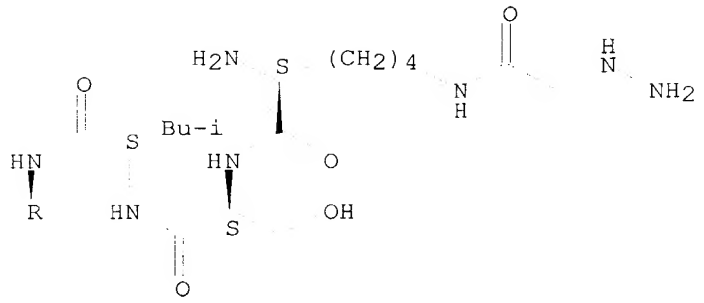
PAGE 1-A



PAGE 1-B



PAGE 2-A



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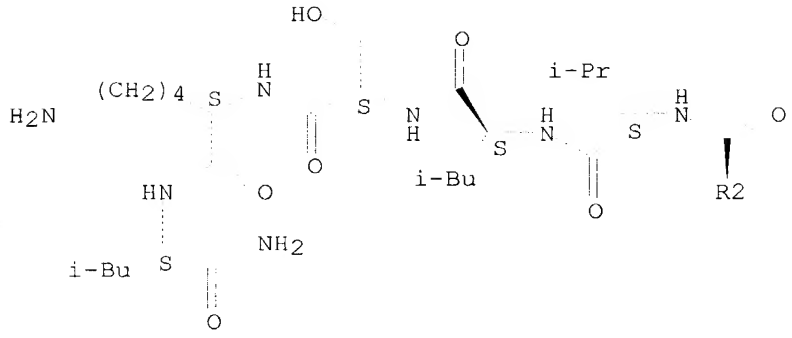


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

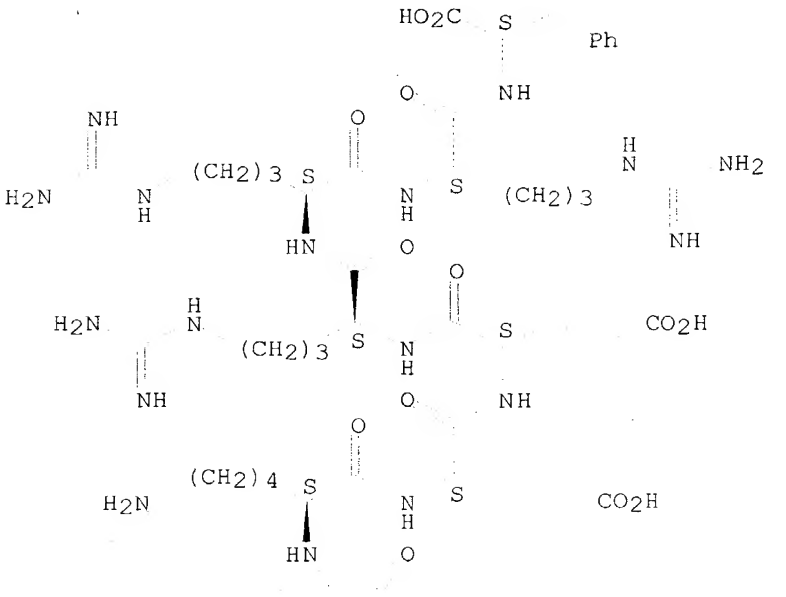
1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 136:247892

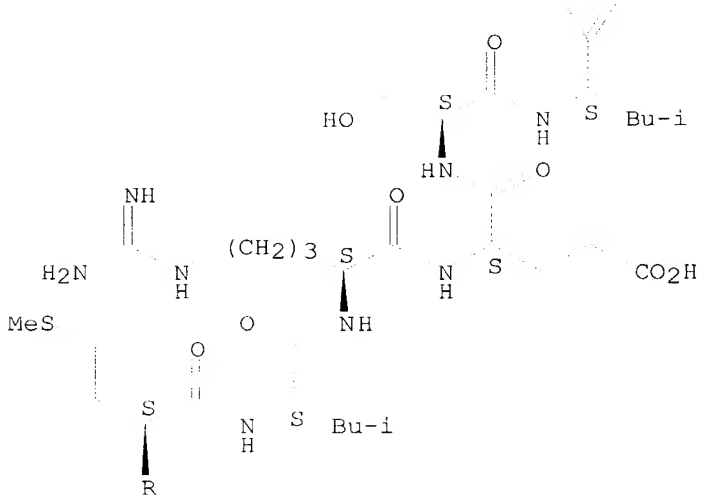
L51 ANSWER 4 OF 7 REGISTRY COPYRIGHT 2004 ACS on STN
RN **379722-31-3** REGISTRY
CN L-Phenylalanine, L-lysyl-L-seryl-L-.alpha.-glutamyl-L-arginyl-L-.alpha.-glutamyl-L-arginyl-L-methionyl-L-leucyl-L-arginyl-L-.alpha.-glutamyl-L-seryl-L-leucyl-L-lysyl-L-.alpha.-glutamyl-L-.alpha.-glutamyl-L-arginyl-L-arginyl-L-arginyl- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 577: PN: WO0193836 SEQID: 575 claimed protein
FS PROTEIN SEQUENCE; STEREOSEARCH
MF C105 H183 N39 O32 S
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

Absolute stereochemistry.

PAGE 1-A



PAGE 2-A



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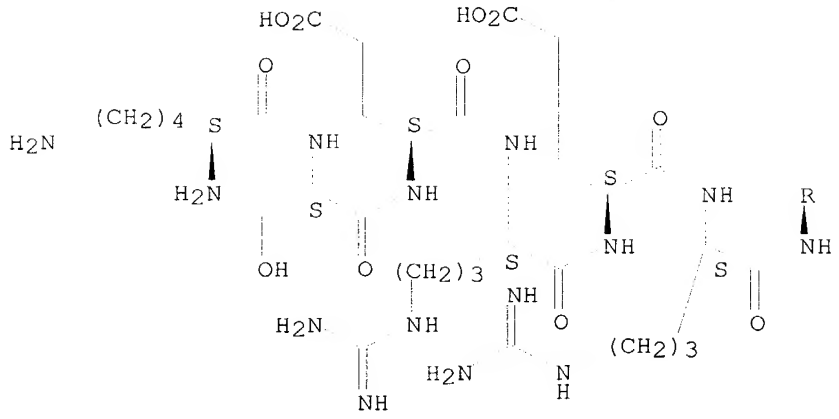


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

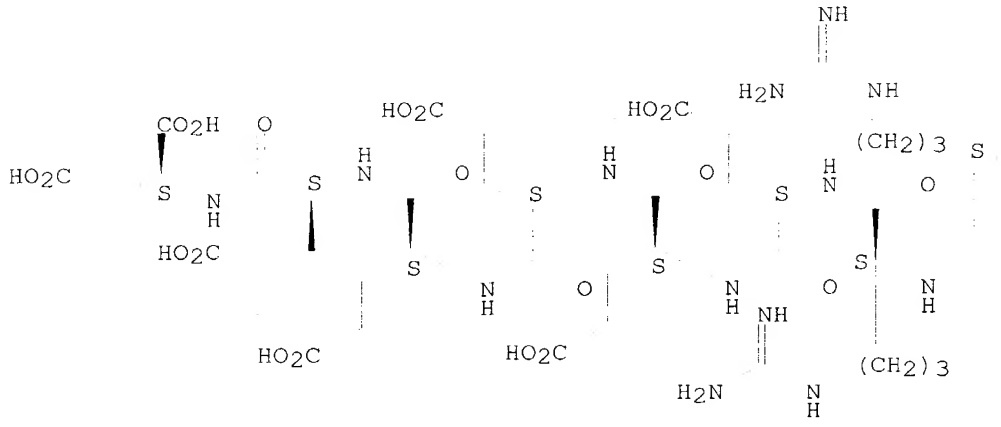
1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 136:58784

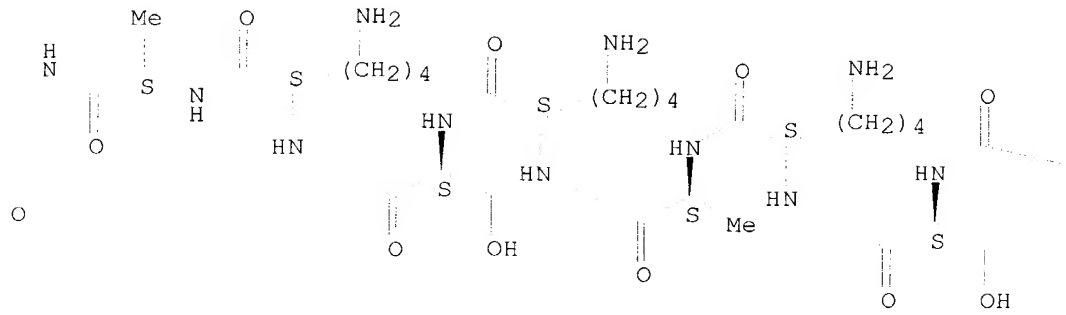
L51 ANSWER 5 OF 7 REGISTRY COPYRIGHT 2004 ACS on STN
RN **379719-25-2** REGISTRY
CN L-Aspartic acid, L-lysyl-L-seryl-L-lysyl-L-alanyl-L-lysyl-L-seryl-L-lysyl-L-alanyl-L-arginyl-L-arginyl-L-.alpha.-glutamyl-L-.alpha.-glutamyl-L-.alpha.-glutamyl-L-.alpha.-glutamyl-L-.alpha.-glutamyl- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 242: PN: WO0193836 SEQID: 240 claimed protein
FS PROTEIN SEQUENCE; STEREOSEARCH
MF C77 H134 N26 O31
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

Absolute stereochemistry.

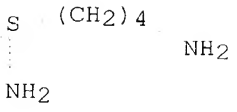
PAGE 1-A



PAGE 1-B



PAGE 1-C



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

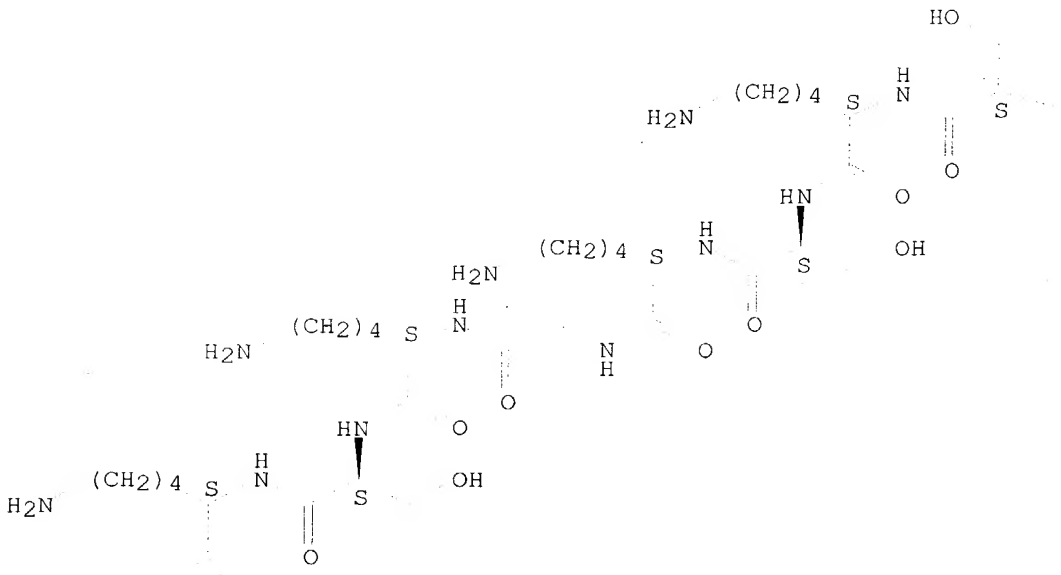
1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 136:58784

L51 ANSWER 6 OF 7 REGISTRY COPYRIGHT 2004 ACS on STN
RN **316821-92-8** REGISTRY
CN L-Lysine, L-lysyl-L-seryl-L-lysyl-L-seryl-L-lysyl-L-seryl-L-lysyl-L-seryl-L-lysylglycyl-L-lysyl-L-seryl-L-lysyl-L-seryl-L-lysyl-L-seryl-L-lysyl-L-seryl- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 10: PN: US20030165567 SEQID: 10 claimed protein
FS PROTEIN SEQUENCE; STEREOSEARCH
MF C86 H165 N29 O28
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

Absolute stereochemistry.

PAGE 1-A



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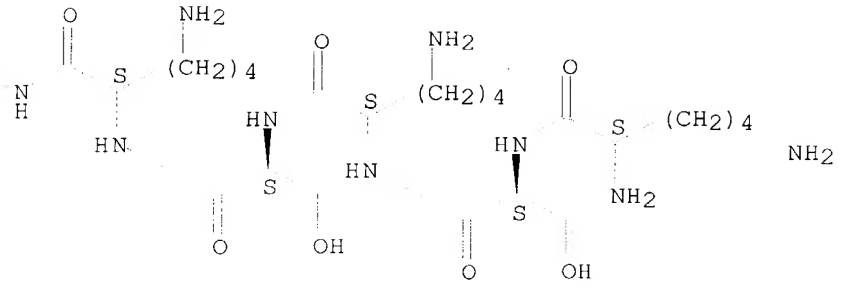
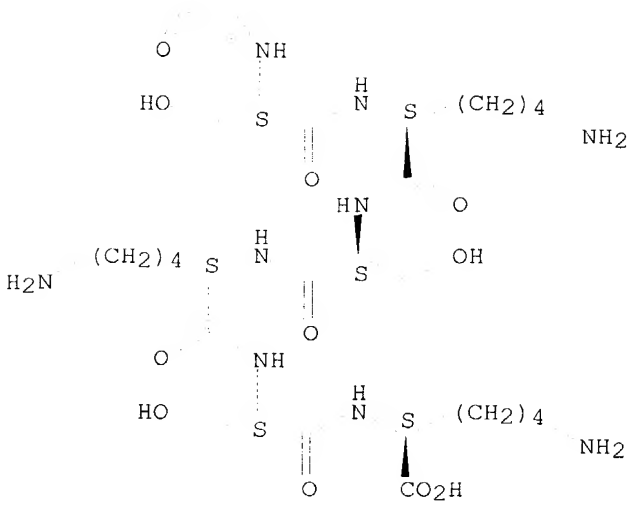


PAGE 2-A



3 REFERENCES IN FILE CA (1907 TO DATE)
3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 139:235379

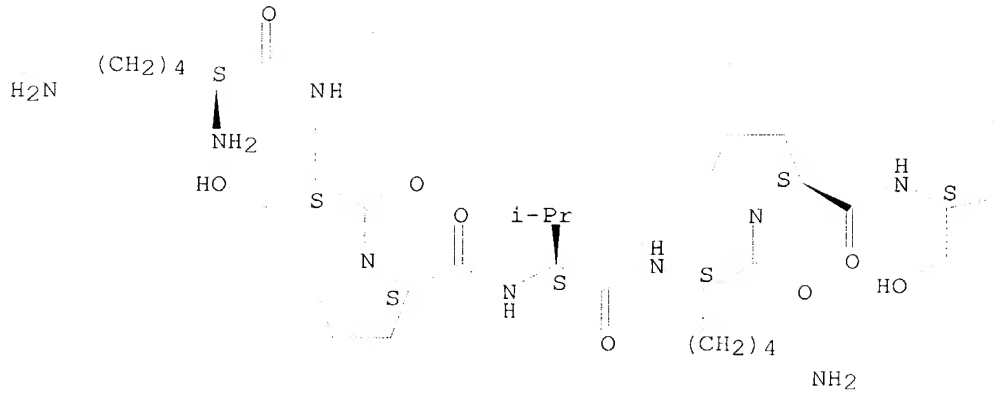
REFERENCE 2: 135:111952

REFERENCE 3: 134:91012

L51 ANSWER 7 OF 7 REGISTRY COPYRIGHT 2004 ACS on STN
RN **123152-19-2** REGISTRY
CN L-Lysine, L-lysyl-L-seryl-L-prolyl-L-valyl-L-lysyl-L-prolyl-L-seryl-L-prolyl-L-valyl-L-.alpha.-glutamyl-L-.alpha.-glutamyl-L-lysylglycyl-L-lysyl-L-seryl-L-prolyl-L-valyl-L-lysyl-L-prolyl-L-seryl-L-prolyl-L-valyl-L-.alpha.-glutamyl-L-.alpha.-glutamyl-L-lysylglycyl- (9CI) (CA INDEX NAME)
FS PROTEIN SEQUENCE; STEREOSEARCH
MF C128 H218 N34 O40
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.

PAGE 1-A



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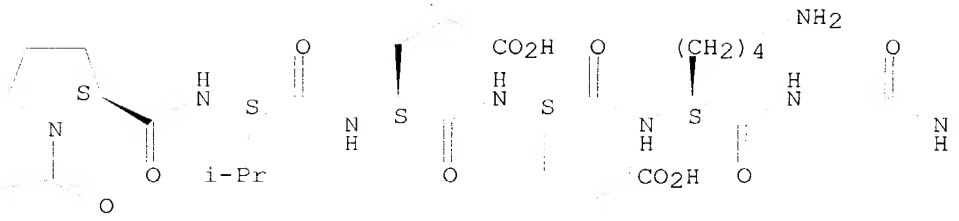

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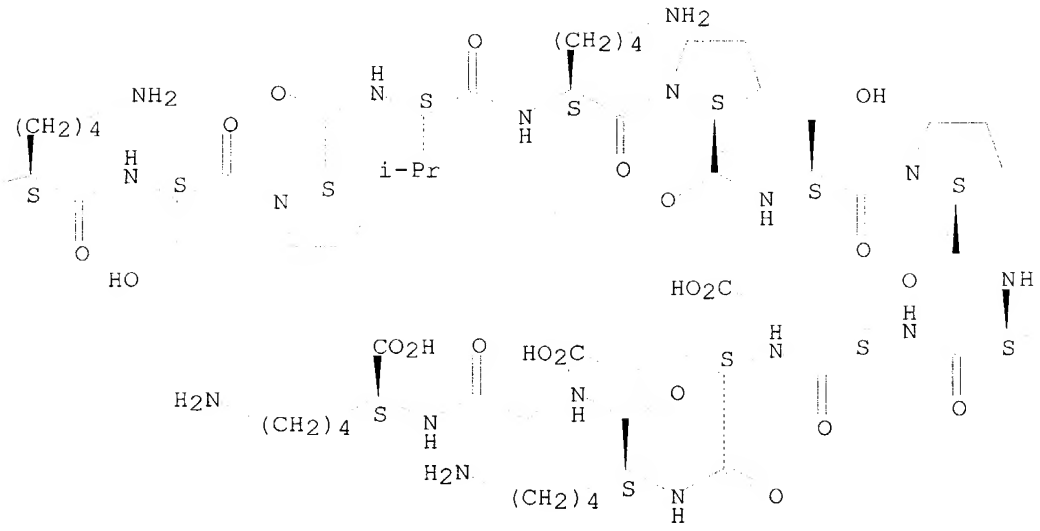

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Pr-i

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 111:190130